QUAD 2:1 MULTIPLEXER

SY10E157
SY100E157

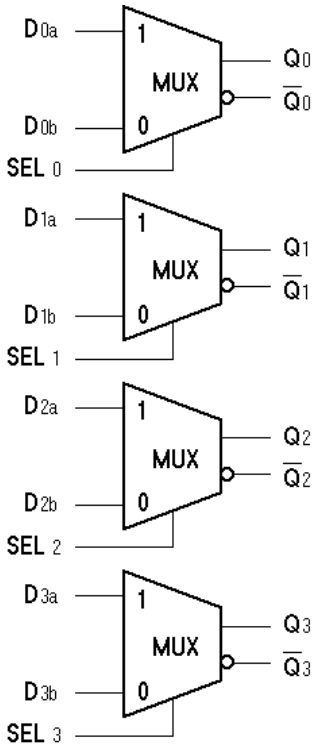
FEATURES

- **Individual select controls**
- **Extended 100E V_{EE} 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.

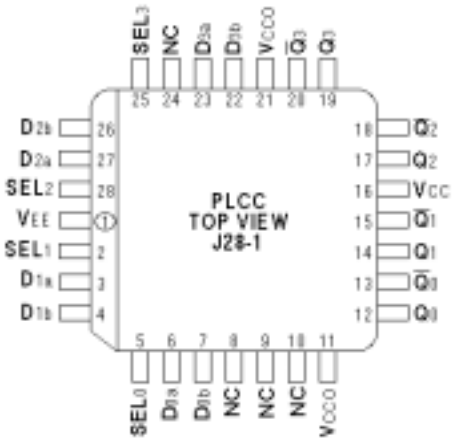
BLOCK DIAGRAM



PIN NAMES

Pin	Function
$D_{0a} – D_{3a}$	Input Data a
$D_{0b} – D_{3b}$	Input Data b
$SEL_0 – SEL_3$	Select Inputs
$Q_0 – Q_3$	True Outputs
$\overline{Q}_0 – \overline{Q}_3$	Inverted Outputs
V_{CCO}	V_{CC} 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} (Min.) to V_{EE} (Max.); V_{CC} = VCCO = GND

Symbol	Parameter	T_A = –40°C			T_A = 0°C			T_A = +25°C			T_A = +85°C			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
I_{IH}	Input HIGH Current													µA
	D	—	—	200	—	—	200	—	—	200	—	—	200	
	SEL	—	—	150	—	—	150	—	—	150	—	—	150	
I_{EE}	Power Supply Current													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]

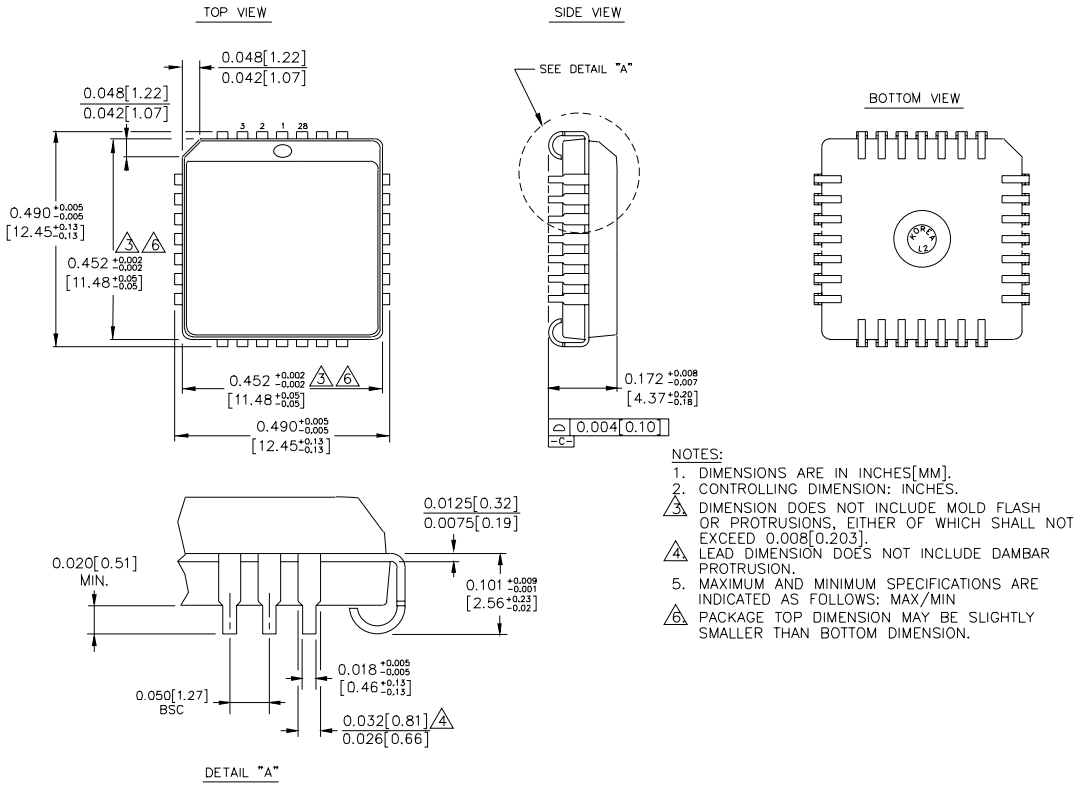
V_{EE} = V_{EE} (Min.) to V_{EE} (Max.); V_{CC} = V_{CCO} = GND

Symbol	Parameter	T_A = –40°C			T_A = 0°C			T_A = +25°C			T_A = +85°C			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
t_{PD}	Propagation Delay to													ps
	D	220	380	550	220	380	550	220	380	550	220	380	550	
	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	Rise/Fall Time	275	400	650	275	400	650	275	400	650	275	400	650	ps
t_f	20% to 80%													

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)



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