



QUAD 2:1 MULTIPLEXER

SY10E157
SY100E157

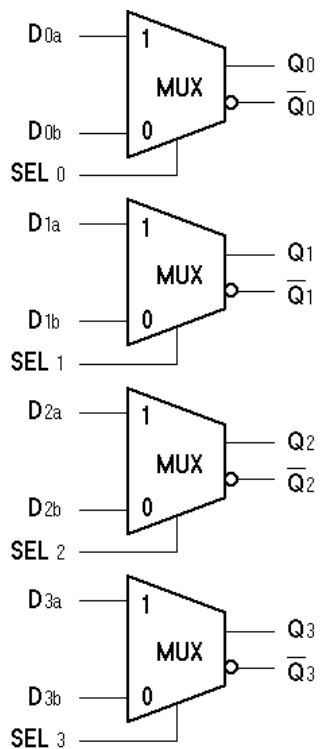
FEATURES

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

DESCRIPTION

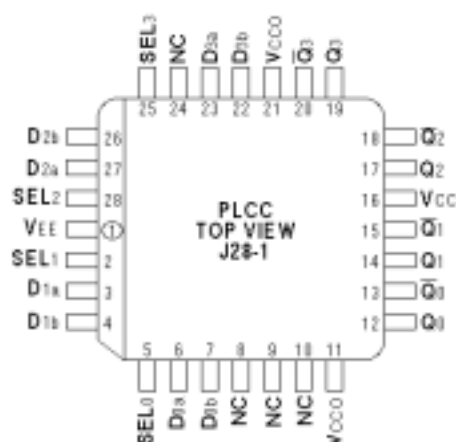
The SY10/100E157 contain four 2:1 multiplexers with differential outputs. The output data are controlled by the individual Select (SEL) inputs. The individual select control makes the devices well suited for random logic designs.

BLOCK DIAGRAM



PIN NAMES

Pin	Function
D0a – D3a	Input Data a
D0b – D3b	Input Data b
SEL0 – SEL3	Select Inputs
Q0 – Q3	True Outputs
$\overline{Q}0 – \overline{Q}3$	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 $T_A = 25^\circ\text{C}$, 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} = 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.	
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 100E	—	32	38	—	32	38	—	32	38	—	37	44	

Note:

1. Specification for packaged product only.

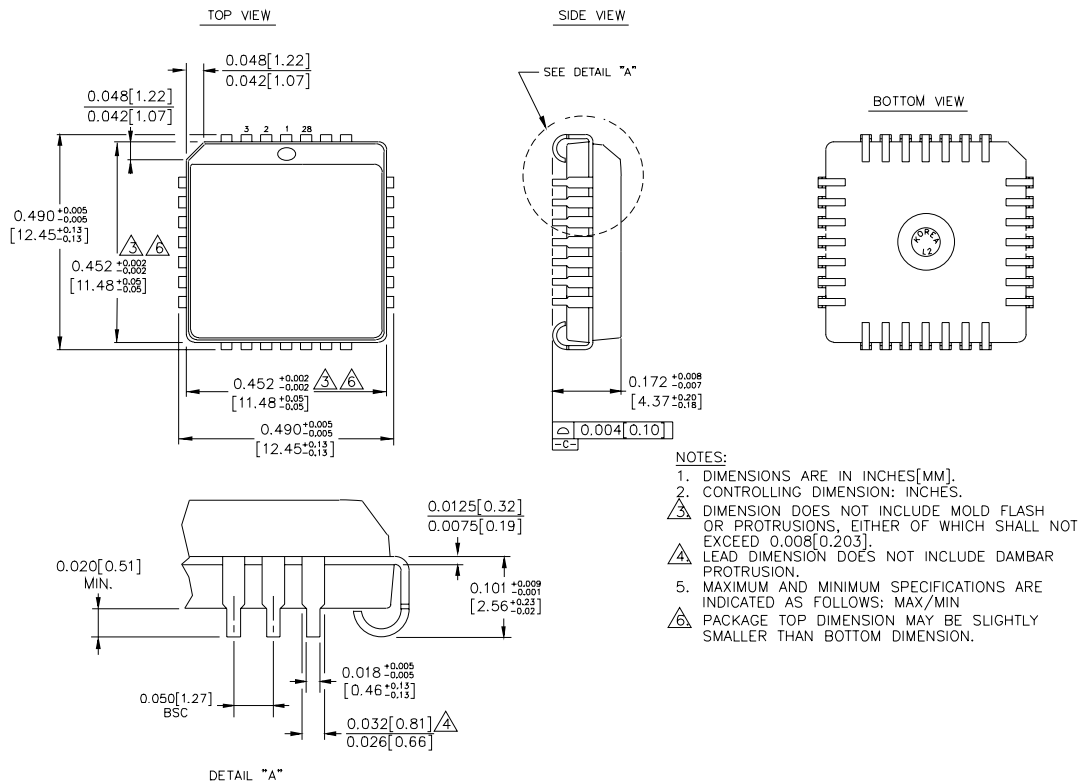
AC ELECTRICAL CHARACTERISTICS⁽²⁾V_{EE} = V_{EE} (Min.) to V_{EE} (Max.); V_{CC} = V_{CCO} = GND

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 D SEL	220 425	380 600	550 800	220 425	380 600	550 800	220 425	380 600	550 800	220 425	380 600	550 800	ps
t _{skew}	Within-Device Skew ⁽¹⁾	—	70	—	—	70	—	—	70	—	—	70	—	
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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