

FEATURES

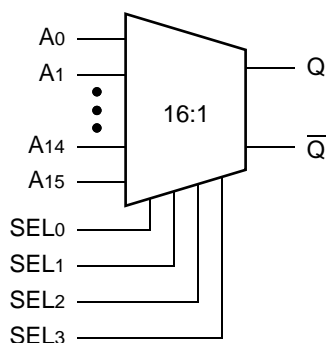
- 850ps Data Input to Output
- Extended 100E VEE range of $-4.2V$ to $-5.5V$
- Differential output
- Fully compatible with industry standard 10KH, 100K ECL levels
- Internal 75K Ω input pull-down resistors
- Fully compatible with Motorola MC10E/100E164
- Available in 28-pin PLCC package

DESCRIPTION

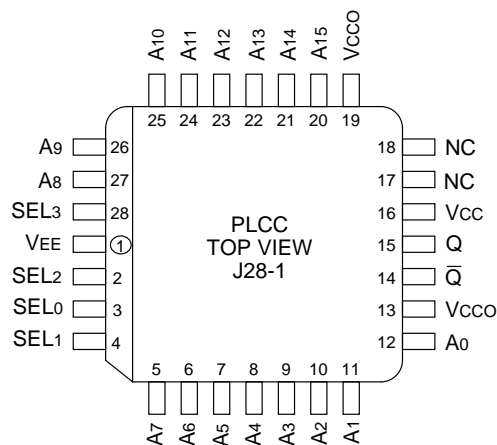
The SY10/100E164 are 16:1 multiplexers with a differential output. The select inputs (SEL0,1,2,3) control which one of the sixteen data inputs (A0–A15) is propagated to the output.

Special attention to the design layout results in a typical skew between the 16 inputs of only 50ps.

BLOCK DIAGRAM



PIN CONFIGURATION



PIN NAMES

Pin	Function
A0 – A15	Data Inputs
SEL[0:3]	Select Inputs
\overline{Q} , Q	Outputs
Vcco	Vcc to Output

TRUTH TABLE

SEL3	SEL2	SEL1	SEL0	Data	SEL3	SEL2	SEL1	SEL0	Data
L	L	L	L	A0	H	L	L	L	A8
L	L	L	H	A1	H	L	L	H	A9
L	L	H	L	A2	H	L	H	L	A10
L	L	H	H	A3	H	L	H	H	A11
L	H	L	L	A4	H	H	L	L	A12
L	H	L	H	A5	H	H	L	H	A13
L	H	H	L	A6	H	H	H	L	A14
L	H	H	H	A7	H	H	H	H	A15

DC ELECTRICAL CHARACTERISTICS

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

Symbol	Parameter	TA = 0°C			TA = +25°C			TA = +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	59	71	59	71	71	59	71	71		
		100E	59	71	59	71	71	68	81	81		

AC ELECTRICAL CHARACTERISTICS

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

Symbol	Parameter	TA = 0°C			TA = +25°C			TA = +85°C			Unit	Condition
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.		
t _{PLH} t _{PHL}	Propagation Delay to Output A Input SEL0 SEL1 SEL2 SEL3	350 500 400 400 400	600 700 675 675 550	850 900 900 900 700	350 500 400 400 400	600 700 675 675 550	850 900 900 900 700	350 500 400 400 400	600 700 675 675 550	850 900 900 900 700	ps	—
t _{skew}	Within-Device Skew	—	50	—	—	50	—	—	50	—	ps	1
t _r t _f	Rise/Fall Times 20–80%	275	400	550	275	400	550	275	400	550	ps	—

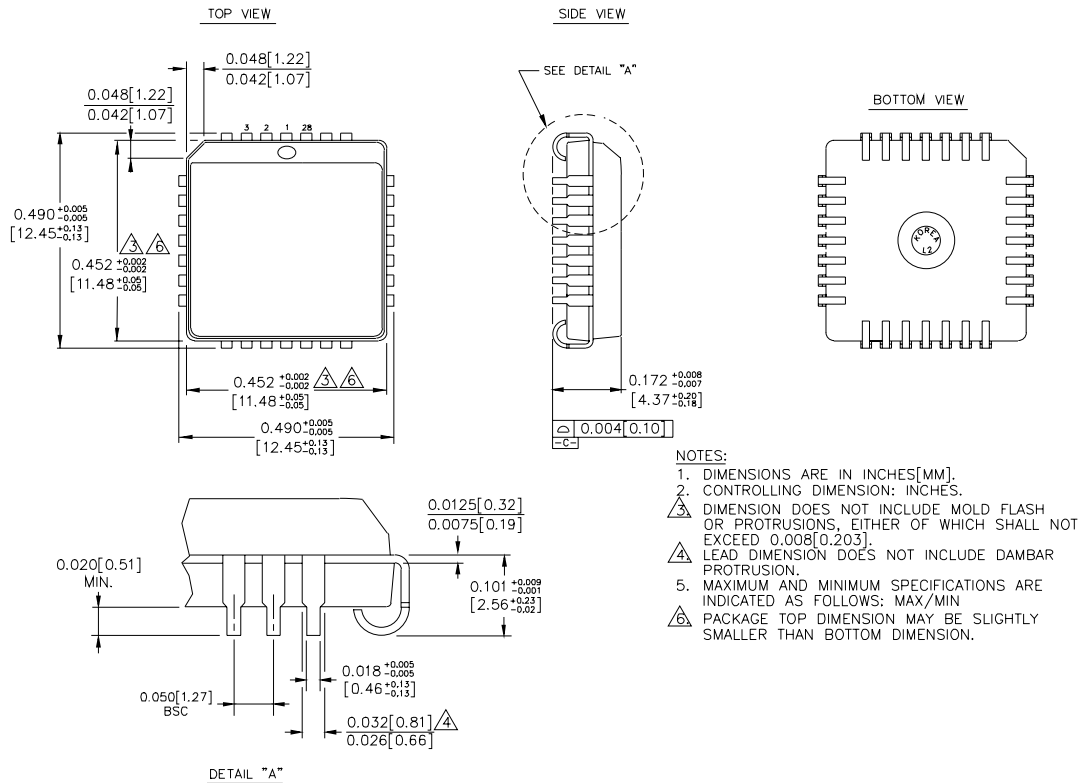
NOTE:

1. Within-device skew is defined as the difference in the A to Q delay between the 16 different A inputs.

PRODUCT ORDERING CODE

Ordering Code	Package Type	Operating Range
SY10E164JC	J28-1	Commercial
SY10E164JCTR	J28-1	Commercial
SY100E164JC	J28-1	Commercial
SY100E164JCTR	J28-1	Commercial

28 LEAD PLCC (J28-1)



Rev. 03

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