

FEATURES

- Max. propagation delay of 900ps
- IEE min. of -92mA
- Industry standard 100K ECL levels
- Extended supply voltage option:
VEE = -4.2V to -5.5V
- Voltage and temperature compensation for improved noise immunity
- Internal 75kΩ input pull-down resistors
- 60% faster than Fairchild 300K at lower power
- Function and pinout compatible with Fairchild F100K
- Available in 28-pin PLCC packages

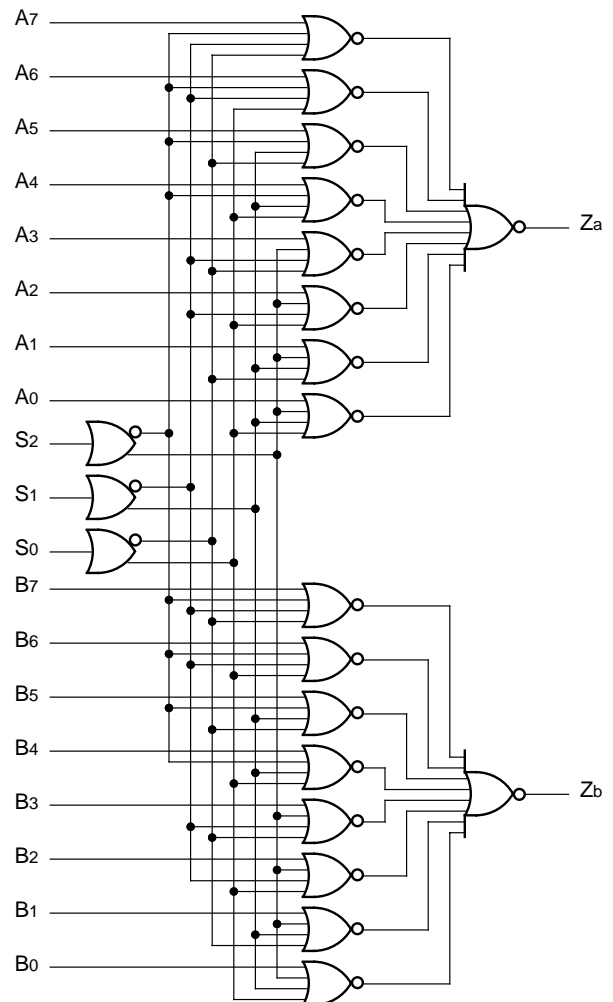
PIN NAMES

Pin	Function
S ₀ – S ₂	Data Select Inputs
A ₀ – A ₇	A Data Inputs
B ₀ – B ₇	B Data Inputs
Z _a , Z _b	Data Outputs
VEES	VEE Substrate
VCCA	VCCO for ECL Outputs

DESCRIPTION

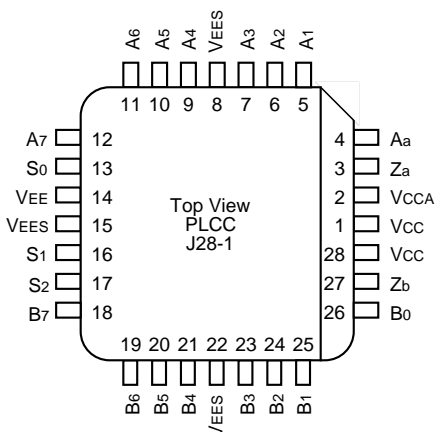
The SY100S363 is a dual 8-input multiplexer designed for use in new, high-performance ECL systems. The three Data Select inputs (S₀, S₁, S₂) determine the bits from each of the inputs (A_n, B_n) that will be passed on through the two outputs. The same bit will be selected from the two groups of 8 inputs. The inputs on this device have 75kΩ pull-down resistors.

BLOCK DIAGRAM



PACKAGE/ORDERING INFORMATION

Ordering Information



28-Pin PLCC (J28-1)

Part Number	Package Type	Operating Range	Package Marking	Lead Finish
SY100S363JC	J28-1	Commercial	SY100S363JC	Sn-Pb
SY100S363JCTR ⁽¹⁾	J28-1	Commercial	SY100S363JC	Sn-Pb
SY100S363JZ ⁽²⁾	J28-1	Commercial	SY100S363JZ with Pb-Free bar-line indicator	Matte-Sn
SY100S363JZTR ^(1, 2)	J28-1	Commercial	SY100S363JZ with Pb-Free bar-line indicator	Matte-Sn

Notes:

1. Tape and Reel.
2. Pb-Free package is recommended for new designs.

TRUTH TABLE⁽¹⁾

Inputs											Outputs
Select			Data								
S ₂	S ₁	S ₀	A ₇ /B ₇	A ₆ /B ₆	A ₅ /B ₅	A ₄ /B ₄	A ₃ /B ₃	A ₂ /B ₂	A ₁ /B ₁	A ₀ /B ₀	Z _a /Z _b
L	L	L								L	L
L	L	L								H	H
L	L	H							L		L
L	L	H							H		H
L	H	L						L			L
L	H	L						H			H
L	H	H					L				L
L	H	H					H				H
H	L	L				L					L
H	L	L				H					H
H	L	H			L						L
H	L	H			H						H
H	H	L		L							L
H	H	L		H							H
H	H	H	L								L
H	H	H	H								H

Note:

1. H = HIGH Voltage Level
L = LOW Voltage Level
Blank = X = Don't Care

DC ELECTRICAL CHARACTERISTICS

$V_{EE} = -4.2V$ to $-5.5V$ unless otherwise specified; $V_{CC} = V_{CCA} = GND$

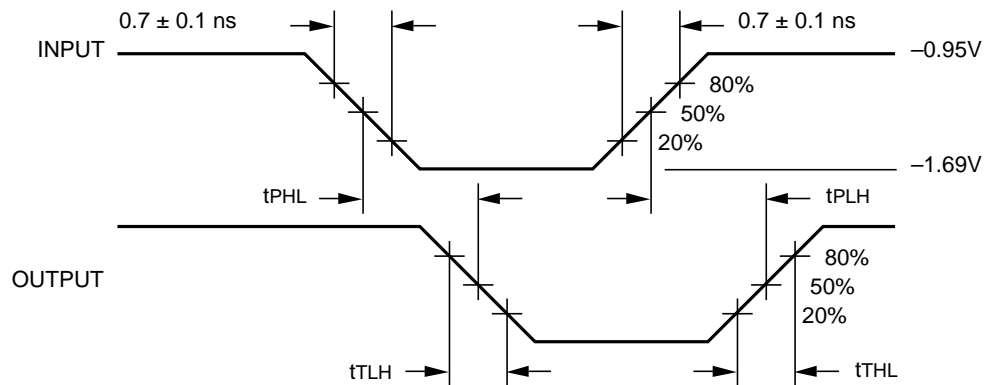
Symbol	Parameter	Min.	Typ.	Max.	Unit	Condition
I_{IH}	Input HIGH Current S_n A_n, B_n	—	—	200	μA	$V_{IN} = V_{IH} (Max.)$
I_{EE}	Power Supply Current	-92	-66	-45	mA	Inputs Open

AC ELECTRICAL CHARACTERISTICS

$V_{EE} = -4.2V$ to $-5.5V$ unless otherwise specified; $V_{CC} = V_{CCA} = GND$

Symbol	Parameter	$T_A = 0^\circ C$		$T_A = +25^\circ C$		$T_A = +85^\circ C$		Unit	Condition
		Min.	Max.	Min.	Max.	Min.	Max.		
t_{PLH} t_{PHL}	Propagation Delay $A_0 - A_7, B_0 - B_7$ to Output	300	900	300	900	300	900	ps	
t_{PLH} t_{PHL}	Propagation Delay $S_0 - S_2$ to Output	400	1300	400	1300	400	1300	ps	
t_{TLH} t_{THL}	Transition Time 20% to 80%, 80% to 20%	300	900	300	900	300	900	ps	

TIMING DIAGRAM

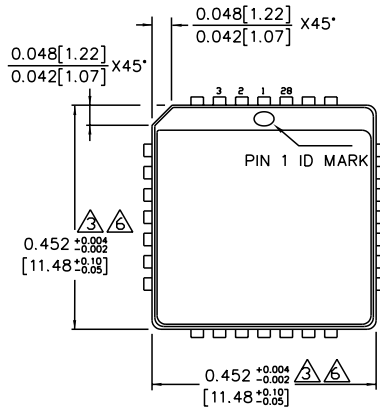


Propagation Delay and Transition Times

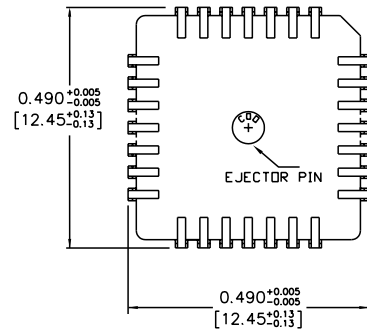
Note:

$V_{EE} = -4.2V$ to $-5.5V$ unless otherwise specified; $V_{CC} = V_{CCA} = GND$

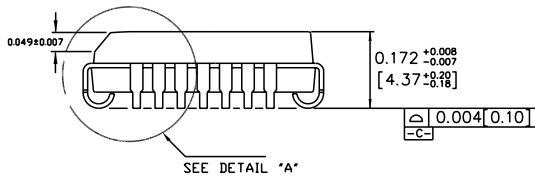
28-PIN PLCC (J28-1)



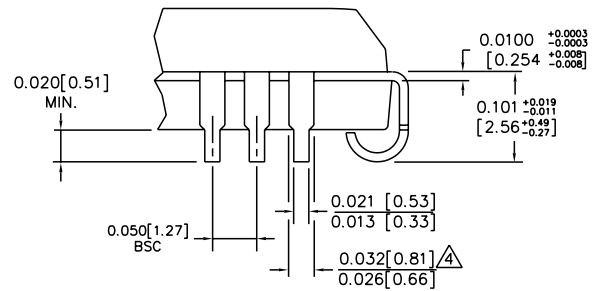
TOP VIEW



BOTTOM VIEW



SIDE VIEW



DETAIL "A"

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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