

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

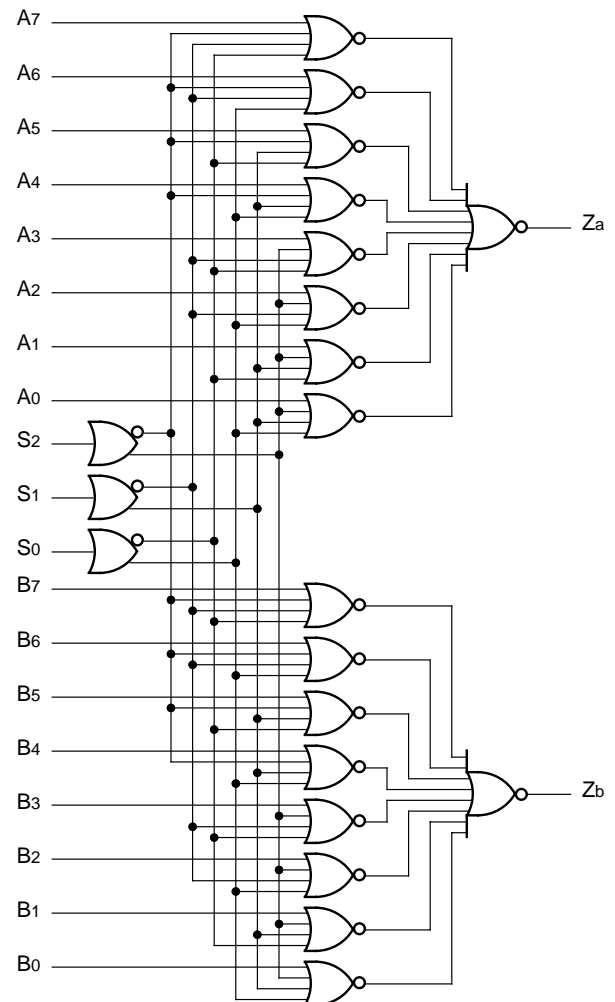
PIN NAMES

Pin	Function
S0 – S2	Data Select Inputs
A0 – A7	A Data Inputs
B0 – B7	B Data Inputs
Za, Zb	Data Outputs
VEES	VEE Substrate
VCCA	VCCO for ECL Outputs

DESCRIPTION

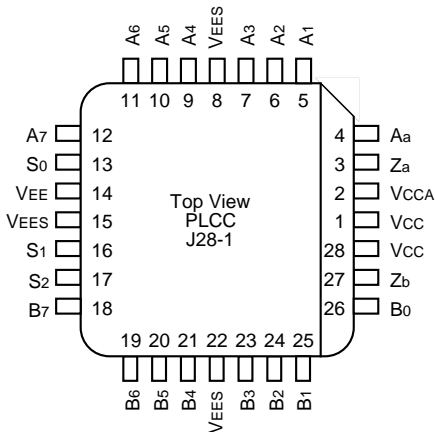
The SY100S363 is a dual 8-input multiplexer designed for use in new, high-performance ECL systems. The three Data Select inputs (S0, S1, S2) determine the bits from each of the inputs (An, Bn) that will be passed on through the two outputs. The same bit will be selected from the two groups of 8 inputs. 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; $V_{CC} = V_{CCA} = GND$

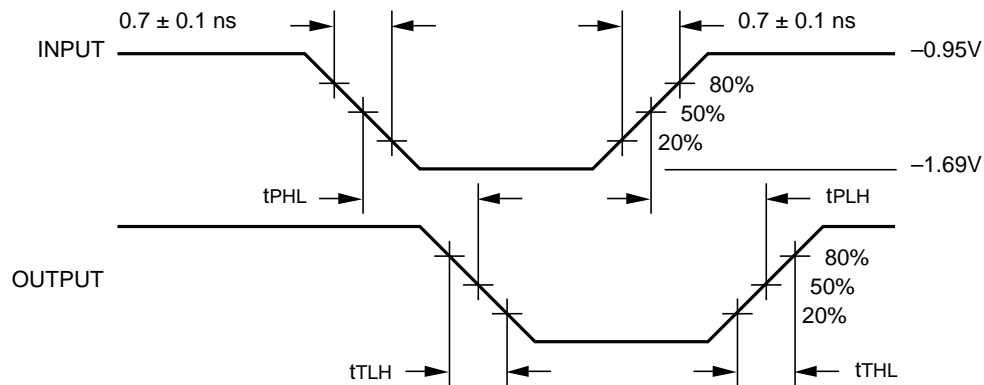
Symbol	Parameter	Min.	Typ.	Max.	Unit	Condition
I_{IH}	Input HIGH Current S_n A_n, B_n	—	—	200	μA	$V_{IN} = V_{IH} (Max.)$
I_{EE}	Power Supply Current	-92	-66	-45	mA	Inputs Open

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

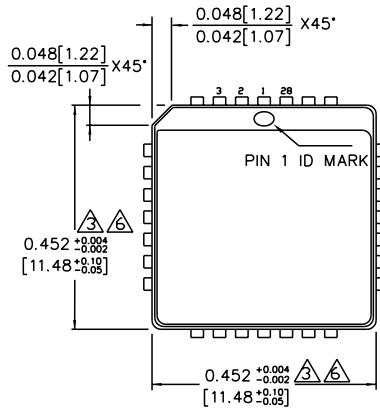


Propagation Delay and Transition Times

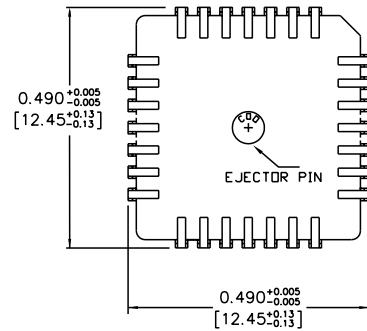
Note:

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

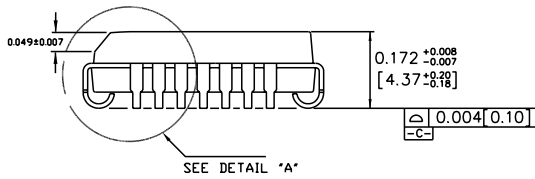
28-PIN PLCC (J28-1)



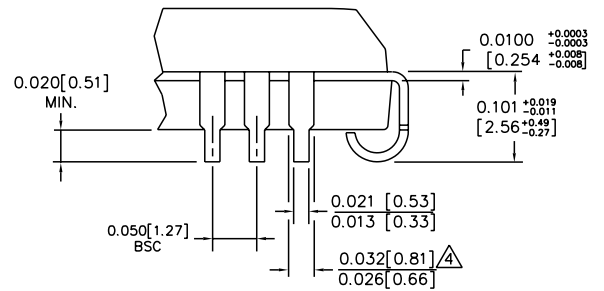
TOP VIEW



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.

Rev. A

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