



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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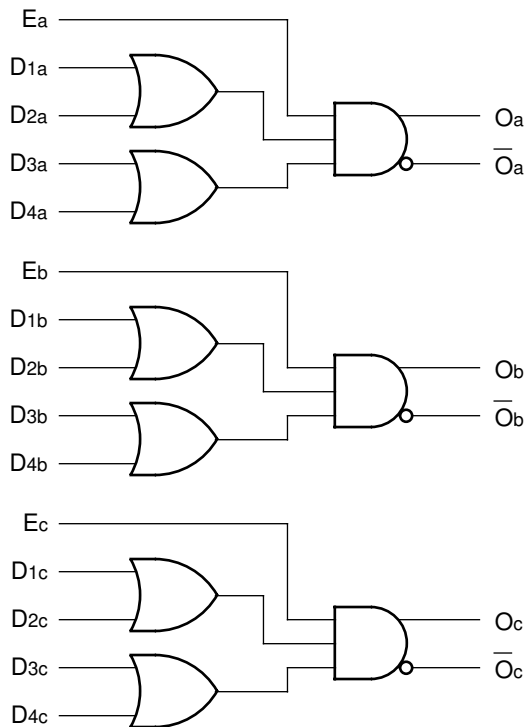
FEATURES

- Max. propagation delay of 900ps
- IEE min. of -48mA
- Extended supply voltage option:
VEE = -4.2V to -5.5V
- Voltage and temperature compensation for improved noise immunity
- Internal 75kΩ input pull-down resistors
- Approximately 40% lower power than Fairchild
- Function and pinout compatible with Fairchild F100K
- Available in 28-pin PLCC package

DESCRIPTION

The SY100S317 is a set of ultra-fast, triple 2-wide OR/AND gates designed for use in high-performance ECL systems. This device offers both true and complement outputs. The inputs on this device have 75kΩ pull-down resistors.

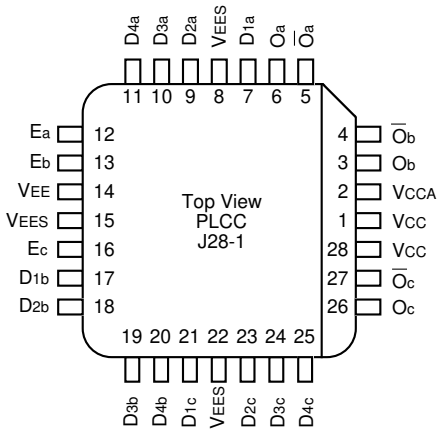
BLOCK DIAGRAM



PIN NAMES

Pin	Function
Dna – Dnc	Data Inputs (n = 1...4)
Ea – Ec	Enable Inputs
Oa – Oc	Data Outputs
$\bar{O}a - \bar{O}c$	Complementary Data Outputs
VEES	VEE Substrate
VCCA	VCCO for ECL Outputs

PACKAGE/ORDERING INFORMATION



28-Pin PLCC (J28-1)

Ordering Information

Part Number	Package Type	Operating Range	Package Marking	Lead Finish
SY100S317JC	J28-1	Commercial	SY100S317JC	Sn-Pb
SY100S317JCTR ⁽¹⁾	J28-1	Commercial	SY100S317JC	Sn-Pb
SY100S317JZ ⁽²⁾	J28-1	Commercial	SY100S317JZ with Pb-Free bar-line indicator	Matte-Sn
SY100S317JZTR ^(1, 2)	J28-1	Commercial	SY100S317JZ with Pb-Free bar-line indicator	Matte-Sn

Notes:

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

DC ELECTRICAL CHARACTERISTICS

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

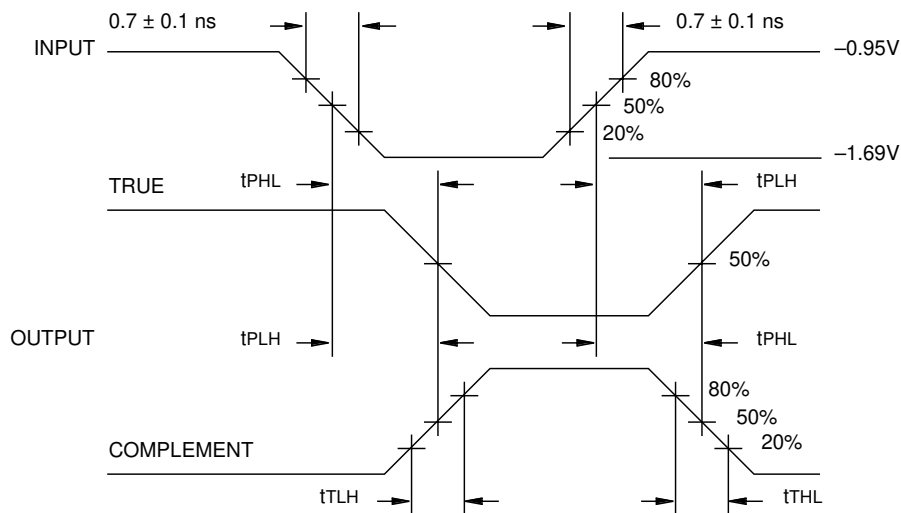
Symbol	Parameter	Min.	Typ.	Max.	Unit	Condition
I _{IH}	Input HIGH Current, All Inputs	—	—	200	μA	V _{IN} = V _{IH} (Max.)
I _{EE}	Power Supply Current	-48	-32	-22	mA	Inputs Open

AC ELECTRICAL CHARACTERISTICS

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

Symbol	Parameter	T _A = 0°C		T _A = +25°C		T _A = +85°C		Unit	Condition
		Min.	Max.	Min.	Max.	Min.	Max.		
t _{PLH} t _{PHL}	Propagation Delay Data to Output	300	900	300	900	300	900	ps	
t _{PLH} t _{PHL}	Propagation Delay Enable to Output	300	700	300	700	300	700	ps	
t _{TLH} t _{THL}	Transition Time 20% to 80%, 80% to 20%	300	900	300	900	300	900	ps	

TIMING DIAGRAM

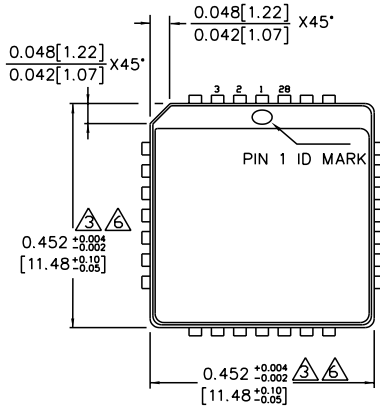


Propagation Delay and Transition Times

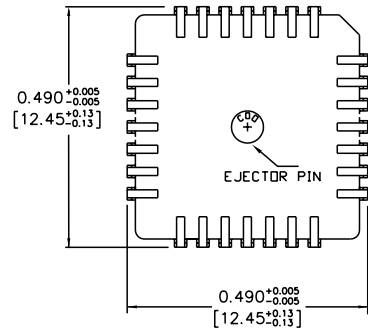
Note:

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

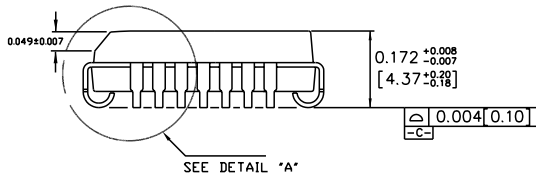
28-PIN PLCC (J28-1)



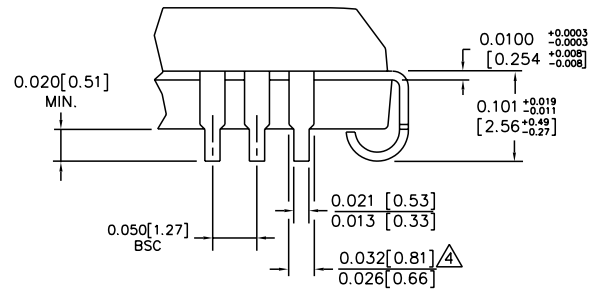
TOP VIEW



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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