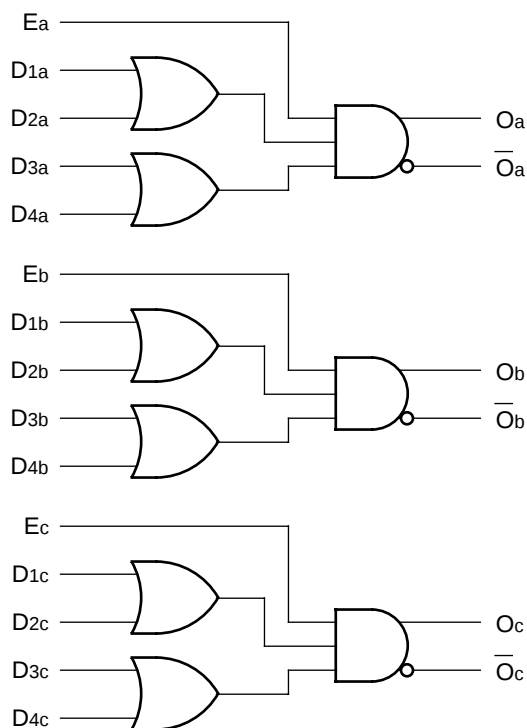


FEATURES

- 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 24-pin CERPACK and 28-pin PLCC packages

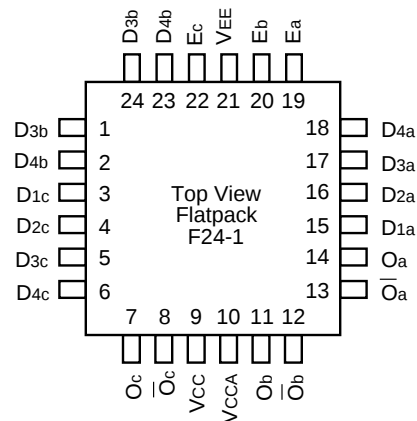
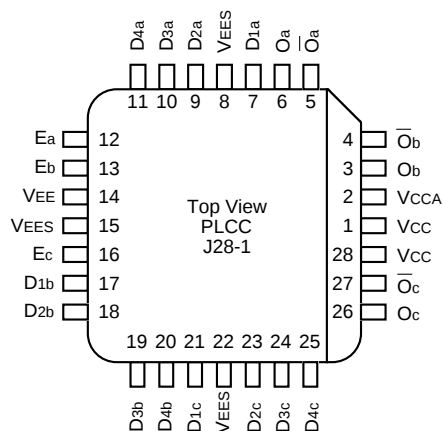
BLOCK DIAGRAM



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.

PIN CONFIGURATIONS



PIN NAMES

Pin	Function
Dna – Dnc	Data Inputs (n = 1...4)
Ea – Ec	Enable Inputs
Oa – Oc	Data Outputs
$\overline{Oa}$ – $\overline{Oc}$	Complementary Data Outputs
VEES	VEE Substrate
VCCA	Vcco for ECL Outputs

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**CERPACK**

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

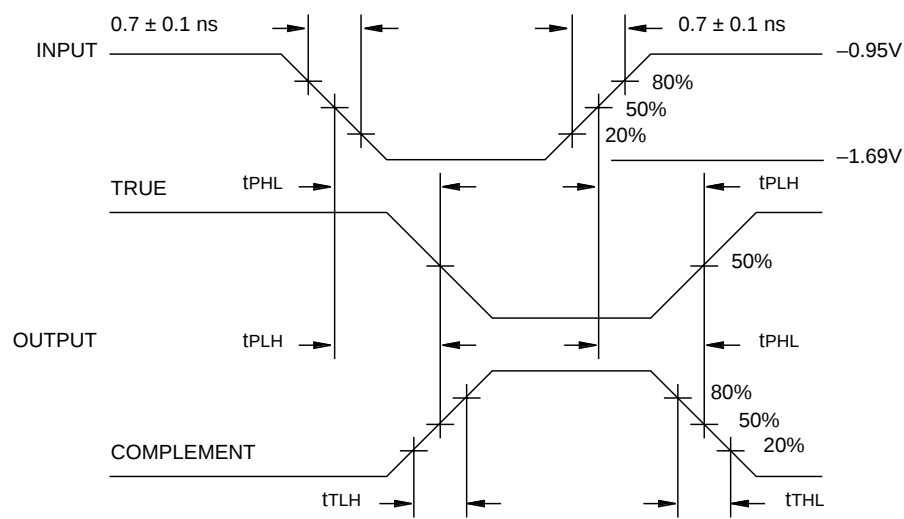
Symbol	Parameter	$T_A = 0^{\circ}C$		$T_A = +25^{\circ}C$		$T_A = +85^{\circ}C$		Unit	Condition
		Min.	Max.	Min.	Max.	Min.	Max.		
t_{PLH} t_{PHL}	Propagation Delay Data to Output	300	1000	300	1000	300	1000	ps	
t_{PLH} t_{PHL}	Propagation Delay Enable to Output	300	800	300	800	300	800	ps	
t_{TLH} t_{THL}	Transition Time 20% to 80%, 80% to 20%	300	900	300	900	300	900	ps	

PLCC

$V_{EE} = -4.2V$ 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 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



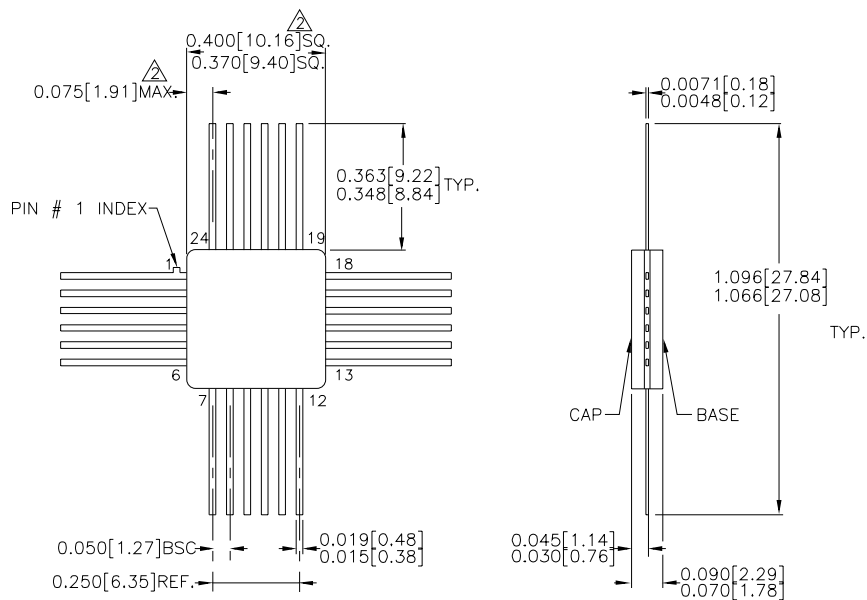
Propagation Delay and Transition Times

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

PRODUCT ORDERING CODE

Ordering Code	Package Type	Operating Range
SY100S317FC	F24-1	Commercial
SY100S317JC	J28-1	Commercial
SY100S317JCTR	J28-1	Commercial

24 LEAD CERPACK (F24-1)

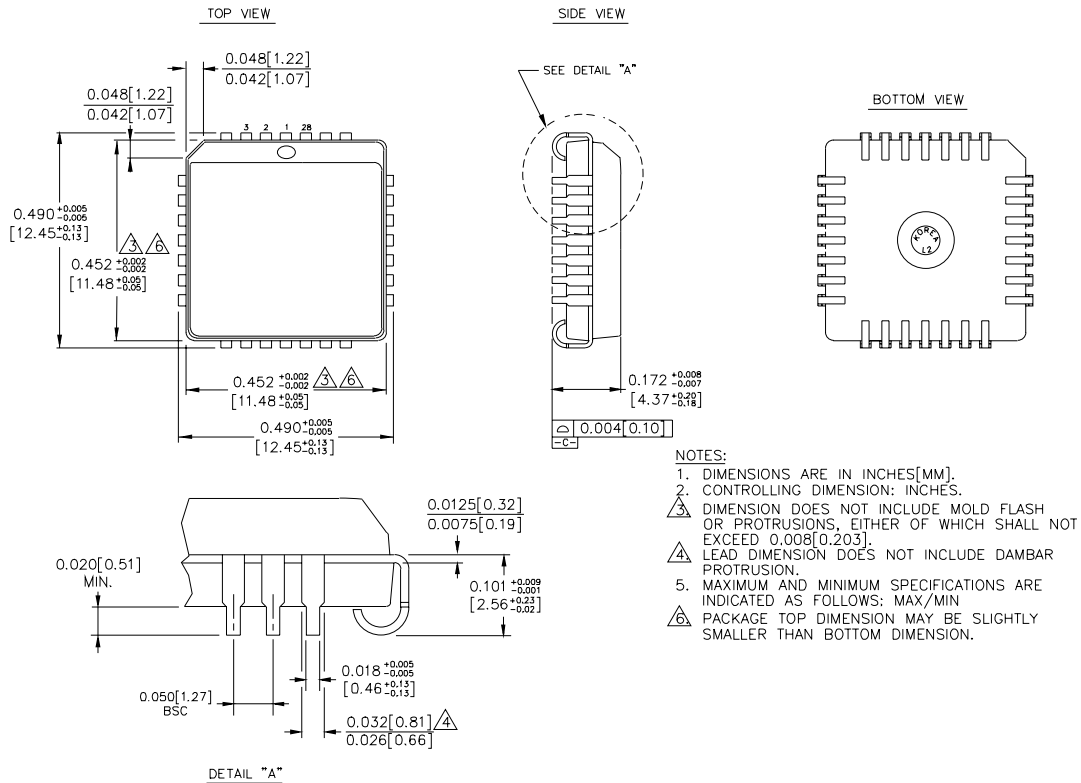


NOTES:

1. DIMENSIONS ARE IN INCHES[MM].
2. THIS DIMENSION INCLUDES GLASS PROTRUSION AND CAP TO BASE ALIGNMENT TOLERANCES.
3. DIMENSIONS SHOWN ARE MAX/MIN, WHERE NOTED.

Rev. 03

28 LEAD PLCC (J28-1)



Rev. 03

MICREL-SYNERGY 3250 SCOTT BOULEVARD SANTA CLARA CA 95054 USA

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