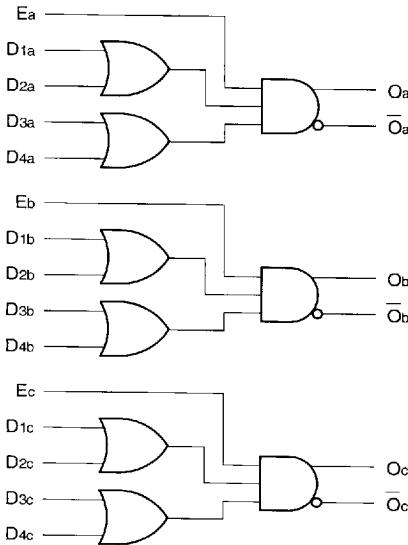


FEATURES

- Max. propagation delay of 900ps
- IEE min. of -48mA
- ESD protection of 2000V
- 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 National or Signetics
- Function and pinout compatible with National and Signetics F100K
- Available in CERDIP, CERPACK and PLCC

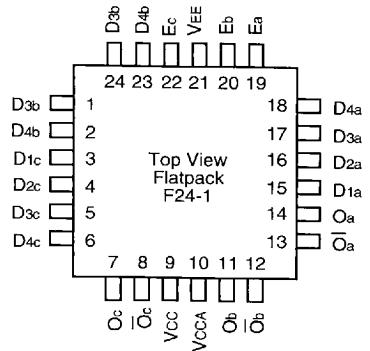
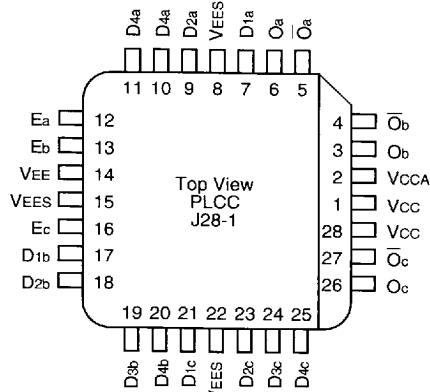
BLOCK DIAGRAM



DESCRIPTION

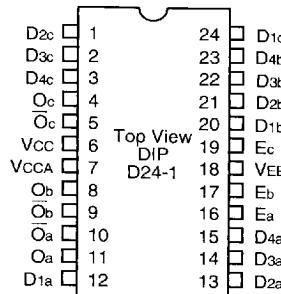
The SY100S317 is a set of ultra-fast, triple 2-wide OR/AND gates designed for use in high-performance ECL systems. This device offers both true and complement outputs. The inputs on this device have 75KΩ pull-down resistors.

PIN CONFIGURATIONS



PIN NAMES

Pin	Function
D _{1a} - D _{4c}	Data Inputs (n = 1...4)
E _a - E _c	Enable Inputs
O _a - O _c	Data Outputs
O _a -bar - O _c -bar	Complementary Data Outputs
VEES	VEE Substrate
VCCA	VCCo for ECL Outputs



DC ELECTRICAL CHARACTERISTICS

$V_{EE} = -4.2V$ to $-5.5V$ unless otherwise specified, $V_{CC} = V_{CCA} = GND$, $T_A = 0^{\circ}C$ to $+85^{\circ}C$

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

CERDIP

$V_{EE} = -4.2V$ to $-5.5V$ unless otherwise specified, $V_{CC} = V_{CCA} = GND$, $T_A = 0^{\circ}C$ to $+85^{\circ}C$

Symbol	Parameter	T _A = 0°C		T _A = +25°C		T _A = +85°C		Unit
		Min.	Max.	Min.	Max.	Min.	Max.	
t _{PLH} t _{PHL}	Propagation Delay Data to Output	300	1100	300	100	300	1100	ps
t _{PLH} t _{PHL}	Propagation Delay Enable to Output	300	900	300	900	300	900	ps
t _{TLH} t _{THL}	Transition Time 20% to 80%, 80% to 20%	300	900	300	900	300	900	ps

CERPACK

$V_{EE} = -4.2V$ to $-5.5V$ unless otherwise specified, $V_{CC} = V_{CCA} = GND$, $T_A = 0^{\circ}C$ to $+85^{\circ}C$

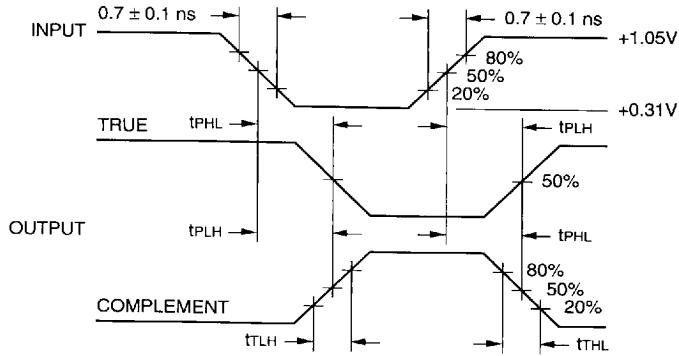
Symbol	Parameter	T _A = 0°C		T _A = +25°C		T _A = +85°C		Unit
		Min.	Max.	Min.	Max.	Min.	Max.	
t _{PLH} t _{PHL}	Propagation Delay Data to Output	300	1000	300	1000	300	1000	ps
t _{PLH} t _{PHL}	Propagation Delay Enable to Output	300	800	300	800	300	800	ps
t _{TLH} t _{THL}	Transition Time 20% to 80%, 80% to 20%	300	900	300	900	300	900	ps

PLCC

$V_{EE} = -4.2V$ to $-5.5V$ unless otherwise specified, $V_{CC} = V_{CCA} = GND$, $T_A = 0^{\circ}C$ to $+85^{\circ}C$

Symbol	Parameter	T _A = 0°C		T _A = +25°C		T _A = +85°C		Unit
		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

PRODUCT ORDERING CODE

Ordering Code	Package Type	Operating Range
SY100S317DC	D24-1	Commercial
SY100S317FC	F24-1	Commercial
SY100S317JC	J28-1	Commercial
SY100S317JCTR	J28-1	Commercial

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