



9-BIT MAGNITUDE COMPARATOR

SY10E166
SY100E166

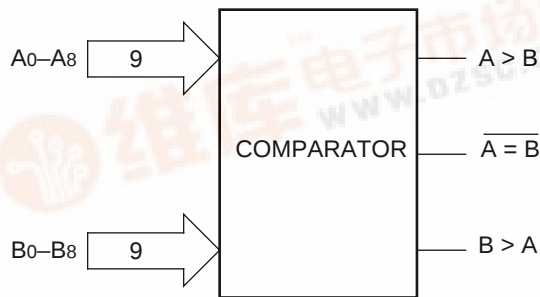
FEATURES

- 1100ps max. Propagation Delay $\overline{A} = B$
- Extended 100E VEE range of -4.2V to -5.5V
- Fully compatible with industry standard 10KH, 100K ECL levels
- Internal 75K Ω input pulldown resistors
- Fully compatible with Motorola MC10E/100E166
- Available in 28-pin PLCC package

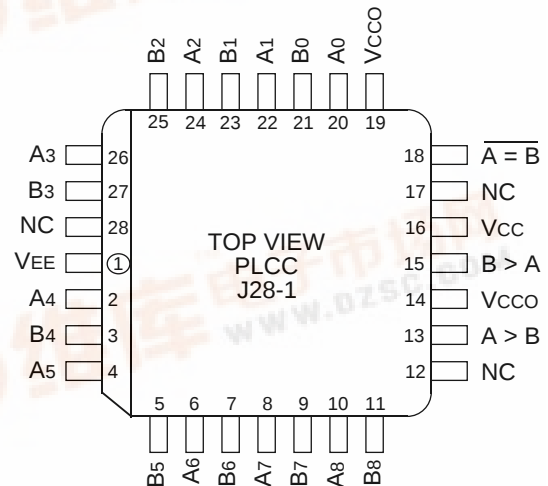
DESCRIPTION

The SY10/100E166 are 9-bit magnitude comparators designed for use in new, high-performance ECL systems. The E166 compares the binary value of two 9-bit words and indicates whether one word is greater than or equal to the other.

BLOCK DIAGRAM



PIN CONFIGURATION



PIN NAMES

Pin	Function
A0-A8	A Data Inputs
B0-B8	B Data Inputs
A > B	A Greater than B Output
B > A	B Greater than A Output
$\overline{A} = B$	A Equal to B Output (active-LOW)
VCCO	Vcc to Output

DC ELECTRICAL CHARACTERISTICSV_{EE} = V_{EE} (Min.) to V_{EE} (Max.); V_{CC} = V_{CCO} = GND

Symbol	Parameter	T _A = 0°C			T _A = +25°C			T _A = +85°C			Unit	Condition
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.		
I _{IH}	Input HIGH Current	—	—	150	—	—	150	—	—	150	μA	—
I _{EE}	Power Supply Current	—	—	—	—	—	—	—	—	—	mA	—
	10E	—	113	136	—	113	136	—	113	136		
	100E	—	113	136	—	113	136	—	130	156		

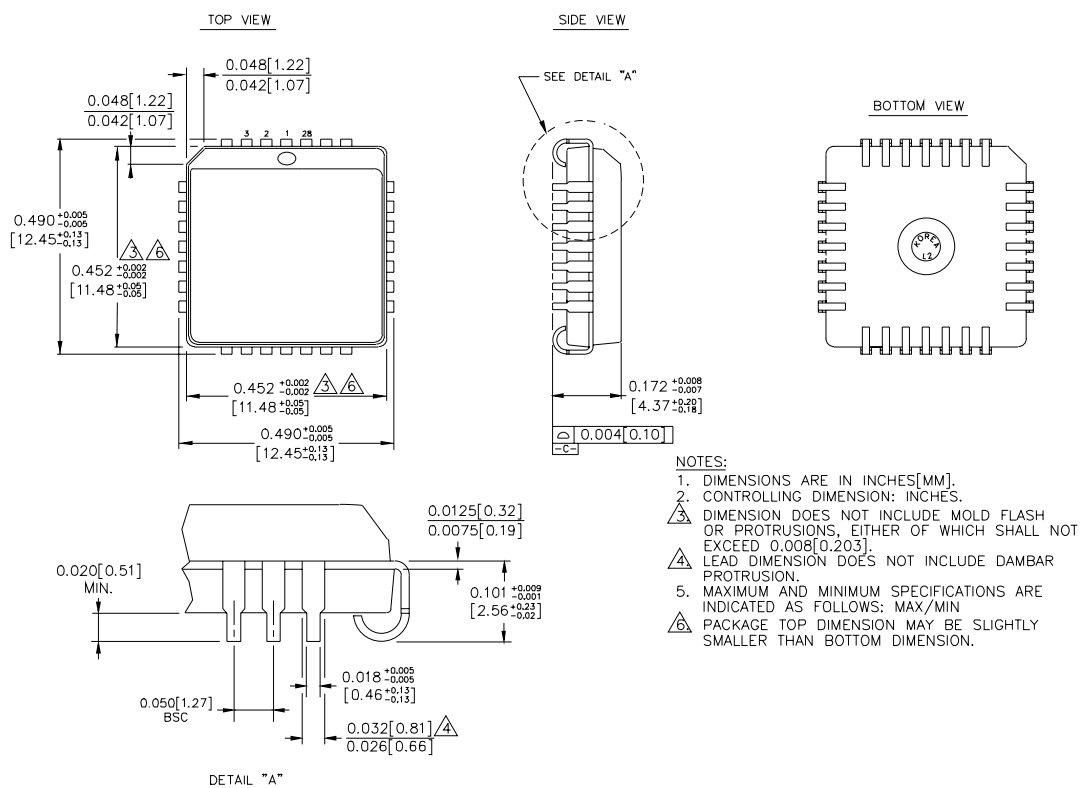
AC ELECTRICAL CHARACTERISTICSV_{EE} = V_{EE} (Min.) to V_{EE} (Max.); V_{CC} = V_{CCO} = GND

Symbol	Parameter	T _A = 0°C			T _A = +25°C			T _A = +85°C			Unit	Condition
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.		
t _{PLH} t _{PHL}	Propagation Delay to Output D to A = B D to A < B, A > B	500 500	750 850	1100 1400	500 500	750 850	1100 1400	500 500	750 850	1100 1400	ps	—
t _r t _f	Rise/Fall Time 20% to 80%	300	450	800	300	450	800	300	450	800		

PRODUCT ORDERING CODE

Ordering Code	Package Type	Operating Range
SY10E166JC	J28-1	Commercial
SY10E166JCTR	J28-1	Commercial
SY100E166JC	J28-1	Commercial
SY100E166JCTR	J28-1	Commercial

28 LEAD PLCC (J28-1)



Rev. 03

