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.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

FEATURES

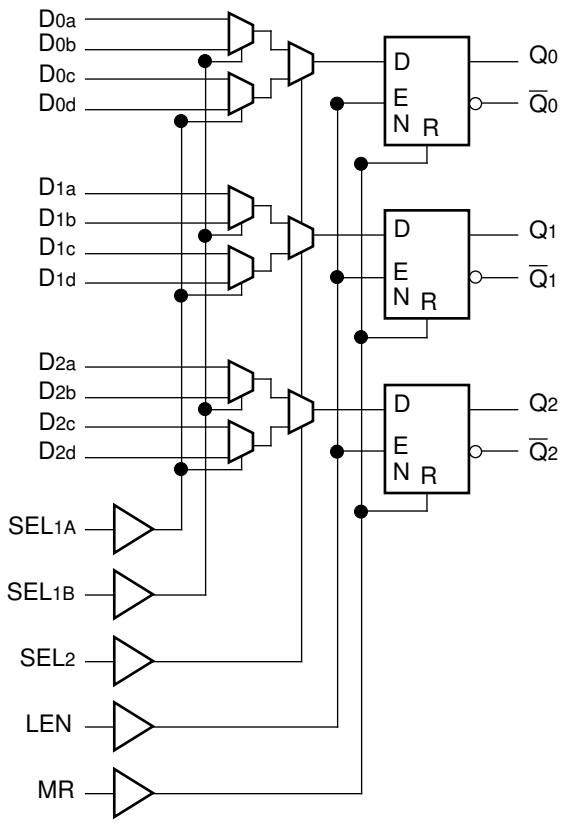
- 950ps max. data to output
- Extended 100E V_{EE} range of –4.2V to –5.5V
- 850ps max. latch enable to output
- Separate select controls
- Differential outputs
- Fully compatible with industry standard 10KH, 100K ECL levels
- Internal 75KΩ input pulldown resistors
- Fully compatible with Motorola MC10E/100E256
- Available in 28-pin PLCC package

DESCRIPTION

The SY10/100E256 offer three 4:1 multiplexers followed by latches with differential outputs designed for use in new, high-performance ECL systems. Separate Select controls are provided for the leading 2:1 mux pairs (see block diagram).

When the Latch Enable (LEN) is at a logic LOW, the latch is transparent and output data is controlled by the multiplexer select controls. A logic HIGH on LEN latches the outputs. The Master Reset (MR) overrides all other controls to set the Q outputs LOW.

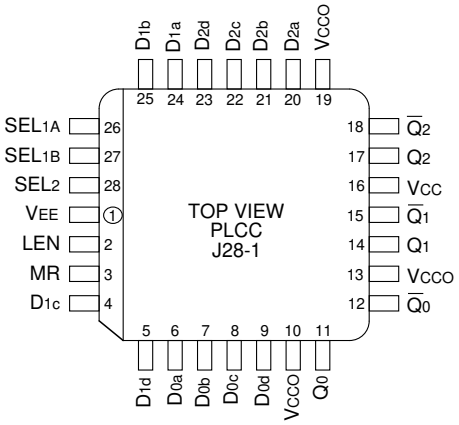
BLOCK DIAGRAM



PIN NAMES

Pin	Function
D_{0x}–D_{2x}	Parallel Data Inputs
SEL_{1A}, SEL_{1B}	First-stage Select Inputs
SEL_2	Second-stage Select Input
LEN	Latch Enable
MR	Master Reset
Q_0, $\overline{Q}_0$–Q_2, $\overline{Q}_2$	Data Outputs
V_{CCO}	V_{CC} to Output

PACKAGE/ORDERING INFORMATION



28-Pin PLCC (J28-1)

Ordering Information[1]

Part Number	Package Type	Operating Range	Package Marking	Lead Finish
SY10E256JC	J28-1	Commercial	SY10E256JC	Sn-Pb
SY10E256JCTR[2]	J28-1	Commercial	SY10E256JC	Sn-Pb
SY100E256JC	J28-1	Commercial	SY100E256JC	Sn-Pb
SY100E256JCTR[2]	J28-1	Commercial	SY100E256JC	Sn-Pb
SY10E256JZ[3]	J28-1	Commercial	SY10E256JZ with Pb-Free bar-line indicator	Matte-Sn
SY10E256JZTR[2, 3]	J28-1	Commercial	SY10E256JZ with Pb-Free bar-line indicator	Matte-Sn
SY100E256JZ[3]	J28-1	Commercial	SY100E256JZ with Pb-Free bar-line indicator	Matte-Sn
SY100E256JZTR[2, 3]	J28-1	Commercial	SY100E256JZ with Pb-Free bar-line indicator	Matte-Sn

Notes:

1. Contact factory for die availability. Dice are guaranteed at $T_A = 25°C$, DC Electricals only.
2. Tape and Reel.
3. Pb-Free package is recommended for new designs.

TRUTH TABLE

Pin	State	Operation
SEL_2	H	Output c/d Data
SEL_{1A}	H	Input d Data
SEL_{1B}	H	Input b Data

DC ELECTRICAL CHARACTERISTICS

V_{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	—	69	83	—	69	83	—	69	83		
	100E	—	69	83	—	69	83	—	79	96		

AC ELECTRICAL CHARACTERISTICS

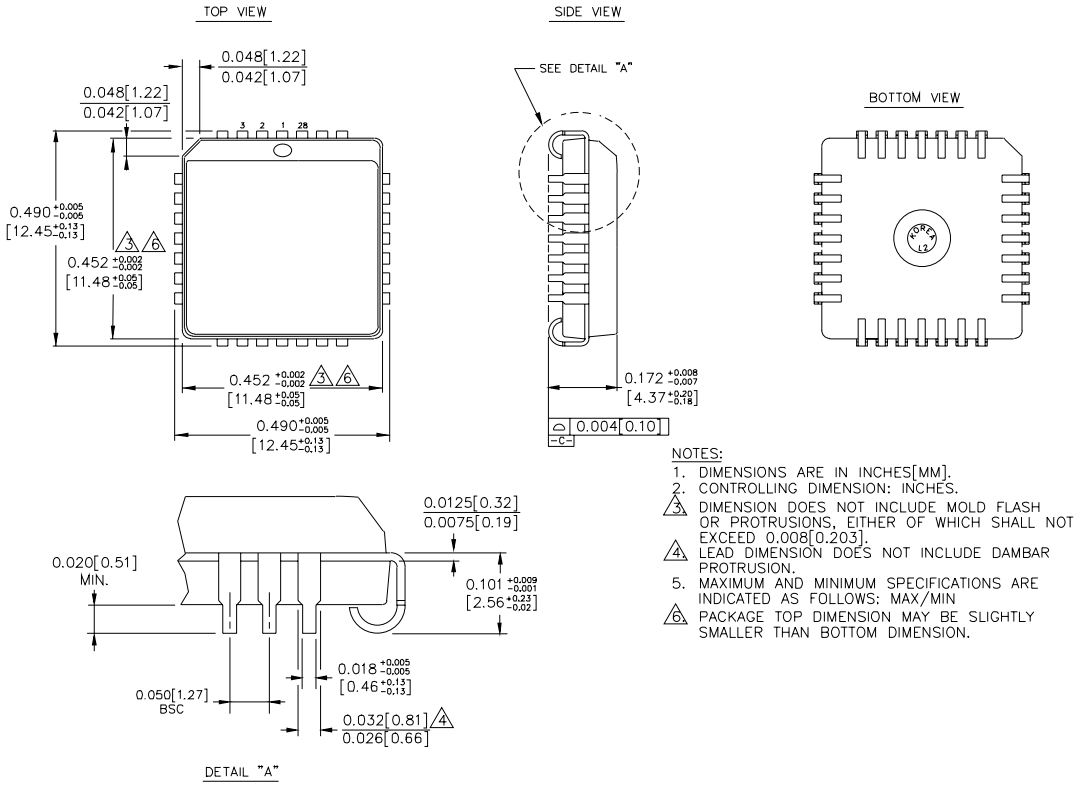
V_{EE} = V_{EE} (Min.) to V_{EE} (Max.); V_{CC} = V_{CCO} = GND

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_{PD}	Propagation Delay to Output										ps	—
	D	400	600	900	400	600	900	400	600	900		
	SEL_1	550	775	1050	550	775	1050	550	775	1050		
	SEL_2	450	650	900	450	650	900	450	650	900		
	LEN	350	500	800	350	500	800	350	500	800		
	MR	350	600	825	350	600	825	350	600	825		
t_S	Set-up Time										ps	—
	D	400	275	—	400	275	—	400	275	—		
	SEL_1	600	300	—	600	300	—	600	300	—		
	SEL_2	500	250	—	500	250	—	500	250	—		
t_H	Hold Time										ps	—
	D	300	–275	—	300	–275	—	300	–275	—		
	SEL_1	100	–300	—	100	–300	—	100	–300	—		
	SEL_2	200	–250	—	200	–250	—	100	–250	—		
t_{RR}	Reset Recovery Time	700	600	—	700	600	—	700	600	—	ps	—
t_{PW}	Minimum Pulse Width, MR	400	—	—	400	—	—	400	—	—	ps	—
t_{skew}	Within-Device Skew	—	50	—	—	50	—	—	50	—	ps	1
t_r t_f	Rise/Fall Time 20% to 80%	275	475	700	275	475	700	275	475	700	ps	—

Note:

1. Within-device skew is defined as identical transitions on similar paths through a device.

28-PIN PLCC (J28-1)



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. 03

MICREL, INC. 2180 FORTUNE DRIVE SAN JOSE, CA 95131 USA

TEL + 1 (408) 944-0800 FAX + 1 (408) 474-1000 WEB http://www.micrel.com