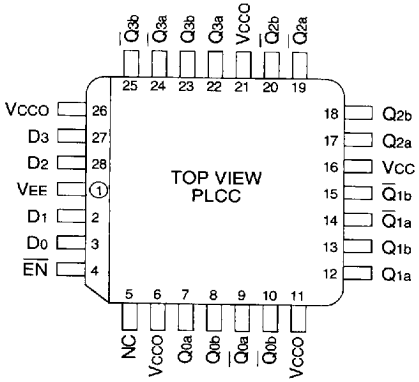
FEATURES

- **600ps max. propagation delay**
- **Extended 100E V_{EE} range of –4.2V to –5.5V**
- **Common enable input**
- **Fully compatible with industry standard 10KH, 100K I/O levels**
- **Internal 75KΩ input pulldown resistors**
- **ESD protection of 2000V**
- **Fully compatible with Motorola MC10E/100E112**

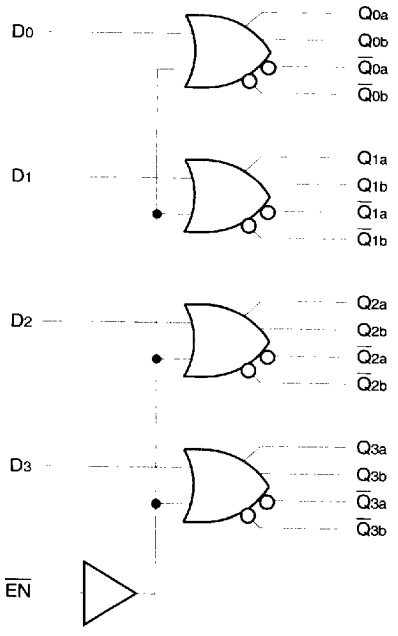
DESCRIPTION

The SY10/100E112 are quad drivers designed for use in new, high-performance ECL systems. The E112 has two pairs of OR/NOR outputs from each gate and a common, buffered enable input. The data input can also be used as an ECL memory address fan-out driver, although the E111 is designed specifically for this purpose, and offers lower skew than the E112. For memory address driver applications where scan capabilities are required, please refer to the SY10/100E212 device.

PIN CONFIGURATION



BLOCK DIAGRAM



PIN NAMES

Pin	Function
D0-D3	Data Inputs
EN	Enable Input
Qna, Qnb	True Outputs
Qna, Qnb	Inverting Outputs
VCCO	Vcc to Output

Rev.: C Amendment: /0
Issue Date: May, 1996

TRUTH TABLE

$\overline{EN}$	Qn	$\overline{Q_n}$
L	Dn	$\overline{D_n}$
H	H	L

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										µA	—
	$\overline{EN}$	—	—	150	—	—	150	—	—	150		
	D	—	—	200	—	—	200	—	—	200		
I_{EE}	Power Supply Current										mA	—
	10E	—	47	56	—	47	56	—	47	56		
	100E	—	47	56	—	47	56	—	54	65		

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_{PLH}	Propagation Delay to Output										ps	—
t_{PHL}	D	200	400	600	200	400	600	200	400	600		
	$\overline{EN}$	275	450	675	275	450	675	275	450	675		
t_{skew}	Within-Device Skew										ps	
	Dn to Qn, $\overline{Q_n}$	—	80	—	—	80	—	—	80	—		1
	Qna to Qnb	—	40	—	—	40	—	—	40	—		2
t_r	Rise/Fall Time	275	425	700	275	425	700	275	425	700	ps	—
t_f	20% to 80%											

NOTES:

1. Within-device skew is defined as identical transitions on similar paths through a device.
2. Skew defined between common OR or common NOR outputs of a single gate.

PRODUCT ORDERING CODE

Ordering Code	Package Type	Operating Range
SY10E112JC	J28-1	Commercial
SY10E112JCTR	J28-1	Commercial
SY100E112JC	J28-1	Commercial
SY100E112JCTR	J28-1	Commercial