

16-Line to 1-Line Data Selector/Multiplexer

Description

The CXB1110Q is an ultra high speed monolithic ECL 16-Line to 1-Line Data Selector/Multiplexer.

The IC select 1 out of 16 inputs for the output. The data present at inputs (In) is selected and sent to the output (Z) in accordance with four bit Select inputs (Sn).

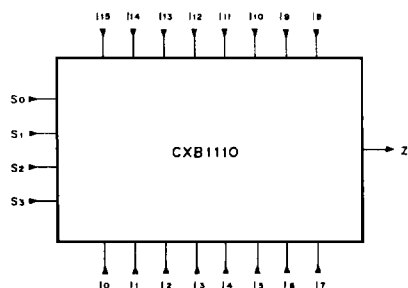
Features

- Typical AC characteristics: $T_{pd}=620ps$ (In)
- Internal pull down resistors on input pins to maintain logic LOW level with the pins left open
- ECL 100K compatible I/O levels

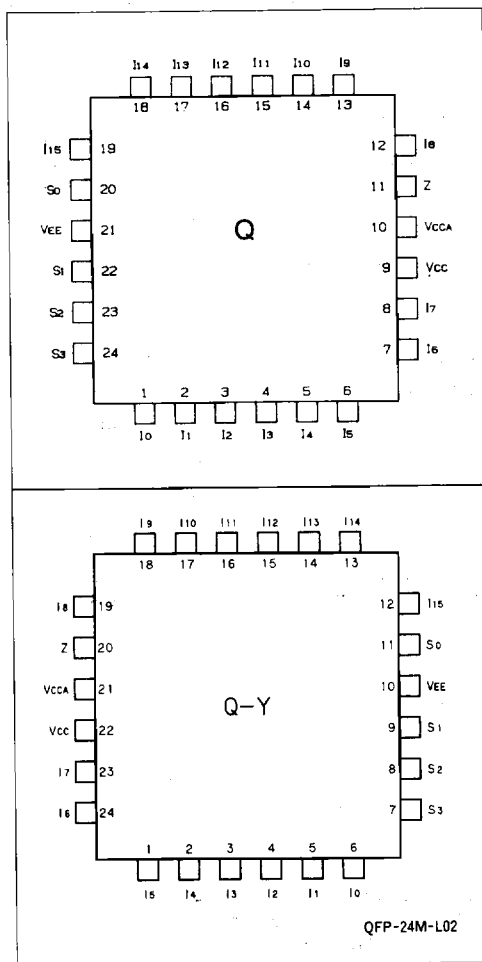
Pin Names

In	Data inputs
Z	Data output
Sn	Select inputs
Vcc	Circuit ground
VCCA	Circuit ground for output
VEE	Negative power supply

Logic Symbol



Pin Assignment



Truth Table

Select Inputs				Output
S ₀	S ₁	S ₂	S ₃	Z
L	L	L	L	I ₀
H	L	L	L	I ₁
L	H	L	L	I ₂
H	H	L	L	I ₃
L	L	H	L	I ₄
H	L	H	L	I ₅
L	H	H	L	I ₆
H	H	H	L	I ₇
L	L	L	H	I ₈
H	L	L	H	I ₉
L	H	L	H	I ₁₀
H	H	L	H	I ₁₁
L	L	H	H	I ₁₂
H	L	H	H	I ₁₃
L	H	H	H	I ₁₄
H	H	H	H	I ₁₅

Note: H ; HIGH voltage level

L ; LOW voltage level

DC Characteristics

$V_{EE} = -4.5 \pm 0.3V$, $V_{CC} = V_{CCA} = GND$, $V_{TT} = -2.0V$, $T_c = 0^\circ C$ to $+85^\circ C$

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Power supply current	I_{EE}		-204	-150	-105	mA

Note: Other DC characteristics; See pages 3-3 and 3-4.

AC Characteristics

$V_{EE} = -4.5 \pm 0.3V$, $V_{CC} = V_{CCA} = GND$, $V_{TT} = -2.0V$, $T_c = 0^\circ C$ to $+85^\circ C$, $R_T = 50\Omega$ to V_{TT}

Item	Symbol	Input	Output	Test Condition	Min.	Typ.	Max.	Unit		
Propagation delay time	T _{PLH}	In	Zn		460	610	770	ps		
	T _{PHL}				470	620	780			
	T _{PLH}	Sn			680	830	990			
	T _{PHL}				1010	1170	1330			
Rise time	T _{TLH}	In,Sn		20% to 80%		270	340			
Fall time	T _{THL}					180	230			

Note: AC test circuit; See page 4-3.

Logic Diagram

