

BX Series Extremely Fast PIN Drivers for Balanced Logic ECL and PECL

DESCRIPTION

BX series drivers are very high speed PIN drivers designed for use in Balanced ECL and PECL systems. They have a wide common-mode input voltage range (typically from +3 V to within 2 volts of the negative supply voltage) and high differential gain, which allows them to switch reliably even when driven by noisy twisted pair lines. The ECL inputs are of very high impedance and not capacitively loaded, so that ring-free matching to ECL system impedance can be accomplished with external matching resistors.

These drivers do not require a -5.2 V supply to assure ECL compatibility. Any negative voltage from -4 volts to -16 volts is acceptable, and the output open-circuit voltage swings to within a volt of the supply rails. Quiescent current consumption is typically less than 12mA, position and negative, per channel.

These drivers provide steady-state output current with current spikes for fast PIN and NIP switching. Testpoints are provided to allow tailoring of output currents and spikes to particular applications.

These drivers contain internal .01 μ f bypass capacitors on both supply inputs.

Screening to MIL-STD-883 is available.

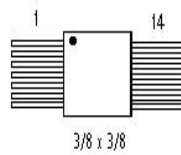
FEATURES

- Extremely High Speed, 5 nsec Typical
- Low Quiescent Current
- Wide Input Common Mode Voltage Range
- Small Size; Up to Six in One Package
- Can be used as single-input ECL driver with proper termination of unused inputs (degraded speed)

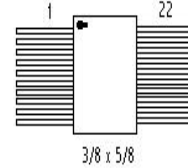
PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS
Pos. Bias Voltage	V +	4.5	5	7	V
Neg. Bias Voltage	V -	-4	-5	-16	V
Switching Speed	T sw	--	0	8	nsec
Pos. Supply (no lead) per Chan.	I q +	--	5	12	mA
Neg Supply (no lead) per Chan.	I q -	--	5	12	mA

Data shown above pertains to "B" voltage code

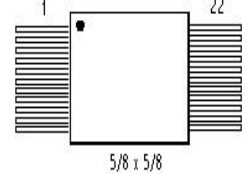
OUTLINES



BX1
case 1,2



BX2, BX3
case 3,4



BX4, BX5, BX6
case C,5

LOGIC

Outputs are noninverting with respect to the true (+) input. Therefore, when IN is more positive than \overline{IN} , output will be positive. Output will be negative when IN is more negative than \overline{IN} .

PIN CONNECTIONS

PIN	BX1	BX2	BX3	BX4	BX5	BX6
1	VEE	VEE	VEE	VEE	VEE	VEE
2	Out	IN1	IN1	IN1	IN1	IN1
3	Gnd	IN1	IN1	IN1	IN1	IN1
4	NC	Out1	Out1	Out1	Out1	Out1
5	IN	IN2	IN2	IN2	IN2	IN2
6	IN	IN2	IN2	IN2	IN2	IN2
7	+5V	Out2	Out2	Out2	Out2	Out2
8	NC	NC	IN3	IN3	IN3	IN3
9	NC	NC	IN3	IN3	IN3	IN3
10	NC	+5V	Out3	Out3	Out3	Out3
11	NC	Gnd	+5V	+5V	+5V	+5V
12	NC	NC	Gnd	Gnd	Gnd	Gnd
13	NC	NC	NC	IN4	IN4	IN4
14	NC	NC	NC	IN4	IN4	IN4
15	NC	NC	NC	Out4	Out4	Out4
16	NC	NC	NC	NC	IN5	IN5
17	NC	NC	NC	NC	IN5	IN5
18	NC	NC	NC	NC	Out5	Out5
19	NC	NC	NC	NC	NC	IN6
20	NC	NC	NC	NC	NC	IN6
21	NC	NC	NC	NC	NC	Out6
22	NC	NC	NC	Gnd	Gnd	Gnd