

DS Series TTL Binary Decoded PIN Drivers

DESCRIPTION

Multiple-channel PIN driver hybrids, accept binary TTL input and select one-of-n outputs. Selected output goes negative, all others remain positive. Overriding enable input forces all outputs positive when low, allowing easy expansion.

Models DS3 thru DS7 provide $\emptyset \rightarrow (n-1)$ or $1 \rightarrow n$ decoding. These drivers have integral reverse bias protection and contain internal $.01\mu\text{F}$ bypass capacitors on both supply inputs.

For higher speed switching, see DF Series Data Sheet.

Screening to MIL-STD-883 available.

FEATURES

- Small Size
- Very Low Quiescent Current, Stable vs VEE
- 40 nsec Typical Delay
- Selectable coding, $0 \rightarrow (n-1)$ or $1 \rightarrow n$

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS
Positive Supply Voltage	V+	4.5	5.0	5.5	V
Negative Supply Voltage	VEE	-2	-5	-16	V
TTL Input I TTL0 Current, input Low	ZEN	-7	--	-21	V
TTL Input I TTL1 Current, input High	A,B,orC	--	--	-0.8	mA
Switch Speed	E	--	--	-1.6	mA
Pos. Supply IQ+ Current, (No Load)	A,B,orC	--	--	40	μA
Neg. Supply IQ- Current, No Load (5 to 21V)	E	--	--	80	μA
Switch Speed	Tsw	--	40	70	nsec.
Pos. Supply IQ+ Current, (No Load)	DS3,DS4	--	18	25	mA
	DS6,DS7	--	20	35	mA
	DS8	--			
Neg. Supply IQ- Current, No Load	DS3,DS4	--	10	15	mA
	DS5,DS6	--	16	20	mA
	DS7,DS8	--			

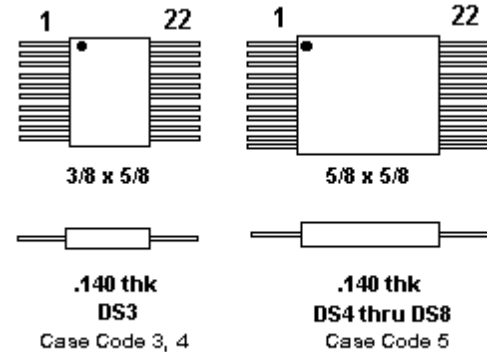
OUTPUT CURRENTS

The following nominal positive output currents are available:

5, 10, 15, 20, 25 mA, and 30, 40, 50, 60, 70 mA.

Negative output current is of equal magnitude at -5V, and increases linearly with increasing negative bias.

OUTLINES



PIN CONNECTIONS

PIN	DS3	DS4	DS5	DS6	DS7	DS8
1	+5V	+5V	+5V	+5V	+5V	+5V
2	A	A	A	A	A	A
3	B	B	B	B	B	B
4	E	C	C	C	C	C
5	TP(0)	E	E	E	E	E
6	TP(3)	GND	GND	GND	GND	GND
7	IN 0/3	NC	NC	NC	NC	NC
8	OUT 0/3	NC	NC	NC	NC	NC
9	OUT 0/3	ZEN	ZEN	ZEN	ZEN	ZEN
10	OUT 1	NC	NC	NC	TP(7)	OUT 7
11	OUT 2	VEE	VEE	VEE	VEE	VEE
12	VEE	NC	NC	TP(6)	OUT 6	OUT 6
13	GND	NC	TP(5)	OUT 5	OUT 5	OUT 5
14	NC	NC	NC	NC	NC	NC
15	NC	TP(4)	OUT 4	OUT 4	OUT 4	OUT 4
16	NC	NC	NC	NC	NC	NC
17	NC	OUT 3	OUT 3	OUT 3	OUT 3	OUT 3
18	NC	IN 0/4	IN 0/5	IN 0/6	IN 0/7	NC
19	NC	OUT 2	OUT 2	OUT 2	OUT 2	OUT 2
20	NC	OUT 1	OUT 1	OUT 1	OUT 1	OUT 1
21	NC	OUT 0/4	OUT 0/5	OUT 0/6	OUT 0/7	OUT 0
22	GND	TP(0)	TP(0)	TP(0)	TP(0)	NC

- 1) ZEN is an alternative negative input which provides a 5V series-connected zener in line with VEE input.
- 2) Connect IN 0/N to TP(0) for active (000) channel. Connect IN 0/N to TP(n) for active (n) channel.
- 3) IN 0/N input is TTL compatible and can be driven from any TTL compatible logic input.