- Package Options Include Plastic and Ceramic DIPs and Ceramic Flat Packages
- Dependable Texas Instruments Quality and Reliability

description

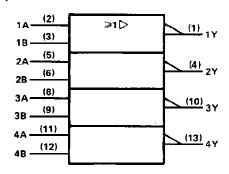
These devices contain four independent 2-input-NOR line drivers. They perform the Boolean function $Y = \overline{A} + \overline{B}$ or $Y = \overline{A} \cdot \overline{B}$. The SN54128 is designed to drive 75 ohm lines. The SN74128 is designed to drive 50 ohm lines.

The SN54128 is characterized for operation over the full military temperature range of $-55\,^{\circ}\text{C}$ to 125 $^{\circ}\text{C}$. The SN74128 is characterized for operation from 0 $^{\circ}\text{C}$ to 70 $^{\circ}\text{C}$.

logic diagram (each driver)



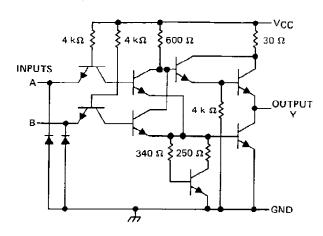
logic symbol†



[†]This symbol is in accordance with ANSI/IEEE Std 91-1984 and IEC Publication 617-12.

SN54128 . . . J OR W PACKAGE **SN74128...N PACKAGE** (TOP VIEW) 1ҮД1 ノ14口 Vcc 13 4Y 1A 🛮 2 18 □3 12 4B 2Y **□**4 11 4A 2A 🛮 5 10 3Y 28 □ 6 9 3B GND □ 7 8 3A

schematic (each driver)



Resistor values shown are nominal,

absolute maximum ratings over operating free-air temperature range (unless otherwise noted)

Operating free-air temperature range:	SN54'	- 55°C to 125°C
	SN74'	0°C to 70°C
Storage temperature range	· · · · · · · · · · · · · · · · · · ·	-65°C to 150°C

NOTE 1: Voltage values are with respect to network ground terminal.

SN54128, SN74128 LINE DRIVERS

recommended operating conditions

			SN54128			SN74128		
<u> </u>		MIN	NOM	MAX	MIN	NOM	MAX	דומט
Vcc	Supply voltage	4.5	5	5.5	4.75	5	5.25	V
V_{IH}	High-level input voltage	2		-	2			V
VIL	Low-level input voltage			0.8			0.8	V
ЮН	High-level output current			- 29	ļ -		- 42.4	mA
loL	Low-level output current			48			48	mA
TΑ	Operating free-air temperature	- 55		125	0		70	°C

electrical characteristics over recommended operating free-air temperature range (unless otherwise noted)

PARAMETER	TEST CONDITIONS †	MIN TYP	MAX	UNIT
ViK	$V_{GC} = MIN_r$ $I_1 = -12 \text{ mA}$		1.5	V
	$V_{CC} = MIN$, $V_{IL} = 0.8 \text{ V}$, $I_{OH} = -2.4 \text{ I}$	mA 2.4 3.4		
v_{OH}	$V_{CC} = MIN$, $V_{IL} = 0.4 \text{ V}$, $I_{OH} = -13.2$	2 mA 2.4		V
	$V_{CC} = MIN$, $V_{IL} = 0.4 \text{ V}$, $I_{OH} = MAX$	2		1
VOL	VCC = MIN, VIH = 2 V, IOL = 48 mA	0.26	0.4	V
11	V _{CC} = MAX. · V ₁ = 5.5 V		1	mΑ
I _{IH}	V _{CC} = MAX, V _I = 2.4 V		40	μА
115	V _{CC} = MAX, V ₁ = 0.4 V		- 1.6	mA
lOs§	V _{CC} = MAX	-70	180	mA
¹ ссн	V _{CC} = MAX	12	21	mA
_I ccr	V _{CC} = MAX	33	57	mΑ

t For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions.

switching characteristics, $V_{CC} = 5 \text{ V}$, $T_A = 25^{\circ}\text{C}$ (see note 2)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	TEST CONDITIONS			TYP	MAX	UNIT
[†] PLH	A or B	Υ .	R _L = 133 Ω,	C _L = 50 pF		6	9	ns
[₹] PHL						8	12	∩s
TPLH .	7010		R _L = 133 Ω,	C _L = 150 pF		10	15	ns
t _{PHL}						12	18	П5

NOTE 2: Load circuits and voltage waveforms are shown in Section 1.

 $[\]pm$ All typical values are at VCC = 5 V, TA = 25°C. \S Not more than one output should be shorted at a time.

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