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8-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS

Logic Diagram (SN74ALS, AS, F, CD74AC/ACT)

Logic Diagram (SN74HC)

: **OBSOLETED or NOT RECOMMENDED NEW DESIGNS**
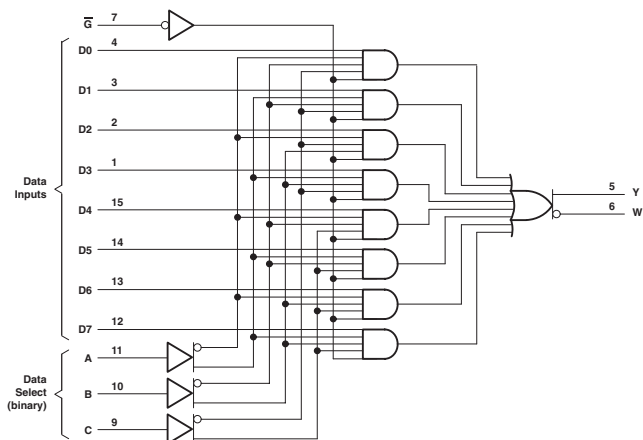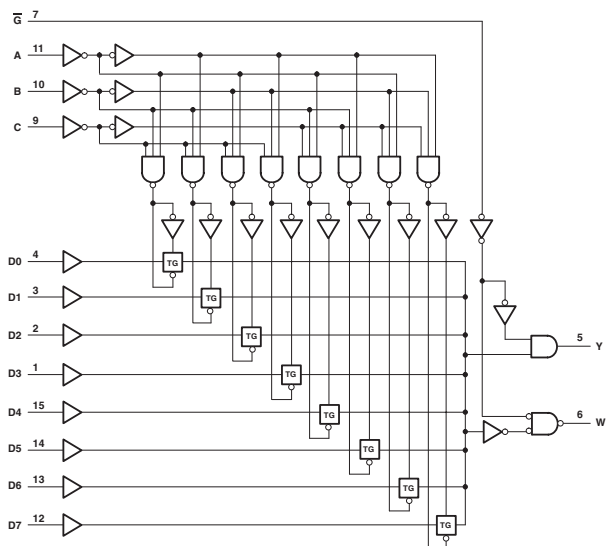
FUNCTION TABLE (SN74)

INPUTS				OUTPUTS	
SELECT					
C	B	A	$\overline{G}$	Y	W
X	X	X	H	L	H
L	L	L	L	D0	$\overline{D0}$
L	L	H	L	D1	$\overline{D1}$
L	H	L	L	D2	$\overline{D2}$
L	H	H	L	D3	$\overline{D3}$
H	L	L	L	D4	$\overline{D4}$
H	L	H	L	D5	$\overline{D5}$
H	H	L	L	D6	$\overline{D6}$
H	H	H	L	D7	$\overline{D7}$

ELECTRICAL CHARACTERISTICS AND RECOMMENDED OPERATING CONDITIONS

PARAMETER	MAX or MIN	TTL	LS	S	ALS	AS	F	SN74 HC	CD74 HC	CD74 HCT	CD74 AC	CD74 ACT	UNIT
I_{CC}	MAX	48	10	70	12	30	21	0.08	0.16	0.16	0.16	0.16	mA
I_{OH}	MAX	-0.8	-0.4	-1	-2.6	-15	-1	-6	-4	-4	-24	-24	mA
I_{OL}	MAX	16	8	20	24	48	24	6	4	4	24	24	mA

SWITCHING CHARACTERISTICS

PARAMETER	INPUT	OUTPUT	MAX or MIN	TTL	LS	S	ALS	AS	F	SN74 HC	CD74 HC	CD74 HCT
t_{PLH}	A, B or C	Y	MAX	38	43	18	18	14.5	12	63	56	62
t_{PHL}	(CD74HC/HCT: Sn)			38	30	18	24	15	9	63	56	62
t_{PLH}	A, B or C	W (CD74HC: $\overline{Y}$)	MAX	26	23	15	24	12	9.5	63	62	65
t_{PHL}	(CD74HC/HCT: Sn)			30	32	13.5	23	12	7.5	63	62	65
t_{PLH}	D0 to D7	Y	MAX	20	32	16.5	10	10.5	7.5	49	51	57
t_{PHL}	(CD74HC/HCT: In)			27	26	18	15	11	7.5	49	51	57
t_{PLH}	D0 to D7	W (CD74HC: $\overline{Y}$)	MAX	14	21	13	15	6.5	7	49	56	54
t_{PHL}	(CD74HC/HCT: In)			14	20	12	15	4.5	5	49	56	54
t_{PLH}	$\overline{G}$	Y	MAX	33	42	12	18	14	10.5	32	42	44
t_{PHL}	(CD74HC/HCT: $\overline{E}$)			33	32	12	19	11	7.5	32	42	44
t_{PLH}	$\overline{G}$	W (CD74HC: $\overline{Y}$)	MAX	21	24	7	19	6	7	32	44	54
t_{PHL}	(CD74HC/HCT: $\overline{E}$)			23	30	7	23	10	6	32	44	54

PARAMETER	INPUT	OUTPUT	MAX or MIN	CD74 AC	CD74 ACT
t_{PLH}	A, B or C	Y	MAX	18.2	20.2
t_{PHL}	(CD74HC/HCT: Sn)			18.2	20.2
t_{PLH}	A, B or C	W (CD74HC: $\overline{Y}$)	MAX	19.6	21.6
t_{PHL}	(CD74HC/HCT: Sn)			19.6	21.6
t_{PLH}	D0 to D7	Y	MAX	13.5	15.5
t_{PHL}	(CD74HC/HCT: In)			13.5	15.5
t_{PLH}	D0 to D7	W (CD74HC: $\overline{Y}$)	MAX	14.9	16.9
t_{PHL}	(CD74HC/HCT: In)			14.9	16.9
t_{PLH}	$\overline{G}$	Y	MAX	12.2	12.1
t_{PHL}	(CD74HC/HCT: $\overline{E}$)			12.2	12.1
t_{PLH}	$\overline{G}$	W (CD74HC: $\overline{Y}$)	MAX	13.5	13.5
t_{PHL}	(CD74HC/HCT: $\overline{E}$)			13.5	13.5

UNIT: ns