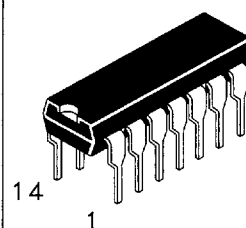


2-Wide 4-Input AND-OR-Invert Gate

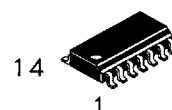
This device performs the logic $Y = \overline{(ABCD) + (EFGH)}$.

- AVG's LS operates over extended Vcc from 4.5 to 5.5 V
- AVG's LS and ALS both have guaranteed DC and AC specification over full temperature and Vcc range
- Switching specifications for ALS at 50 pF
- AVG's ALS has the lowest speed power product (4pJ per gate typical) of all logic series

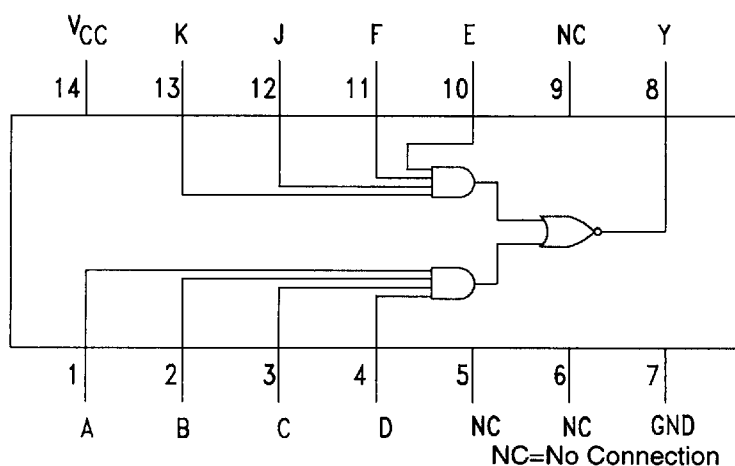
DV74LS55
DV74ALS55



N Suffix
Plastic DIP
AVG-001 Case



D Suffix
Plastic SOP
AVG-002 Case



TRUTH TABLE

A	B	C	D	E	F	J	K	Y
H	H	H	H	X	X	X	X	L
X	X	X	X	H	H	H	H	L
All other combinations								H

H=High Logic Level
L=Low Logic Level
X=Don't Care

ABSOLUTE MAXIMUM RATINGS

Maximum ratings are those values beyond which damage to the device may occur.

Symbol	Parameter	LS55	ALS55	Unit
V _{CC}	Supply Voltage	7.0	7.0	V
V _{IN}	Input Voltage	7.0	7.0	V
T _{STG}	Storage Temperature Range	-65 to +150	-65 to + 150	°C

GUARANTEED OPERATING CONDITIONS

Symbol	Parameter	LS55		ALS55		Unit
		Min	Max	Min	Max	
V _{CC}	Supply Voltage	4.5	5.5	4.5	5.5	V
V _{IH}	High Level Input Voltage	2.0		2.0		V
V _{IL}	Low Level Input Voltage		0.8		0.8	V
I _{OH}	High Level Output Current		-0.4		-0.4	mA
I _{OL}	Low Level Output Current		8.0		8.0	mA
T _A	Ambient Temperature Range	-10 to +70		-10 to + 70		°C

DC ELECTRICAL CHARACTERISTICS over full operating conditions

Symbol	Parameter	Conditions	LS55			ALS55			Unit
			Min	Typ	Max	Min	Typ	Max	
V _{IK}	Input Clamp Voltage	V _{CC} = min, I _{IN} = -18 mA			-1.5			-1.5	V
V _{OH}	High Level Output Voltage	V _{CC} =min, I _{OH} = max	V _{CC} -2	3.5		V _{CC} -2			V
V _{OL}	Low Level Output Voltage	V _{CC} =min; I _{OL} =4 mA V _{CC} =min; I _{OL} =8 mA		0.25 0.35	0.4 0.5		0.25 0.35	0.4 0.5	V
I _{IH}	High Level Input Current	V _{CC} =max, V _{IN} = 2.7V V _{CC} =max, V _{IN} = 7V			20 0.1			20 0.1	μA mA
I _{IL}	Low Level Input Current	V _{CC} =max, V _{IN} =0.4V			-0.4			-0.1	mA
I _O	Short Circuit Current	V _{CC} =max, V _O =2.25V	-20		-110	-30		-112	mA
I _{CC}	Supply Current Outputs High Outputs Low	V _{CC} =Max			0.8 1.3			0.5 0.8	mA mA

SWITCHING CHARACTERISTICS over full operating conditions

Symbol	Parameter	LS55 C _L =15pF		ALS55 C _L =50pF R _L =500Ω		Unit
		Min	Max	Min	Max	
t _{PLH}	Turn-Off Delay, Input to Output		20		14	ns
t _{PHL}	Turn-On Delay, Input to Output		20		12	

SWITCHING WAVEFORMS

