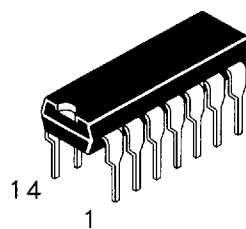


Quad 2-Input AND Buffers

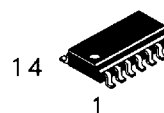
DV74ALS1008A

This device contains four independent 2-input buffers, each of which performs the logic AND function.

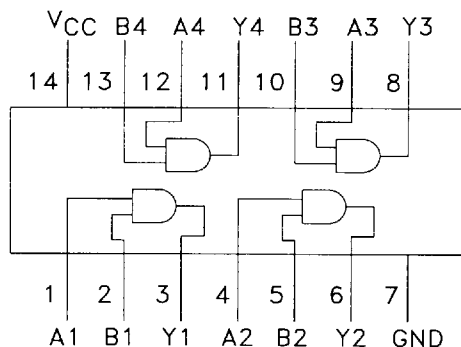
- AVG's ALS has guaranteed DC and AC specification over full temperature and Vcc range
- Switching specifications for ALS at 50 pF
- AVG's ALS has the lowest speed power product (4pJ per gate typical) of all logic series
- Higher speed and 24mA Output Drive



N Suffix
Plastic DIP
AVG-001 Case



D Suffix
Plastic SOP
AVG-002 Case



TRUTH TABLE
Y=AB

Inputs		Outputs
A	B	Y
L	L	L
L	H	L
H	L	L
H	H	H

H = High Level Logic
L = Low Level Logic

ABSOLUTE MAXIMUM RATINGS

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

Symbol	Parameter	ALS1008A	Unit
V _{CC}	Supply Voltage	7.0	V
V _{IN}	Input Voltage	7.0	V
T _{STG}	Storage Temperature Range	-65 to +150	°C

GUARANTEED OPERATING CONDITIONS

Symbol	Parameter	ALS1008A		Unit
		Min	Max	
V _{CC}	Supply Voltage	4.5	5.5	V
V _{IH}	High Level Input Voltage	2.0		V
V _{IL}	Low Level Input Voltage		0.8	V
I _{OH}	High Level Output Current		-2.6	V
I _{OL}	Low Level Output Current		24	mA
T _A	Ambient Temperature Range	-10 to +70		°C

DC ELECTRICAL CHARACTERISTICS over full operating conditions

Symbol	Parameter	Conditions	ALS1008A			Unit
			Min	Typ	Max	
V_{IK}	Input Clamp Voltage	$V_{CC} = \text{min}, I_{IN} = -18 \text{ mA}$			-1.5	V
V_{OH}	High Level Output Voltage	$V_{CC} = \text{min}$				
		$I_{OH} = \text{max}$	2.4	3.2		V
V_{OL}	Low Level Output Voltage	$V_{CC} = \text{min}$				
		$I_{OL} = -0.4 \text{ mA}$	$V_{CC} - 2$			V
I_{IH}	High Level Input Current	$V_{CC} = \text{max}, V_{IH} = 2.7 \text{ V}$			20	μA
		$V_{CC} = \text{max}, V_{IH} = 7.0 \text{ V}$			0.1	mA
I_{IL}	Low Level Input Current	$V_{CC} = \text{max}, V_{IN} = 0.4 \text{ V}$			-0.1	mA
I_O	Output Drive Current	$V_{CC} = \text{max}, V_O = 2.25 \text{ V}$	-30		-112	mA
I_{CC}	Supply Current $V_{CC} = \text{max}$	Total, Output HIGH		1.8	3	mA
		Total, Output LOW		5.7	9.3	mA

SWITCHING CHARACTERISTICS over full operating conditions

Symbol	Parameter	ALS1008A $C_L = 50 \text{ pF}$ $R_L = 500 \Omega$		Unit
		Min	Max	
t_{PLH}	Turn Off Delay, Input to Output	2	9	ns
t_{PHL}	Turn On Delay, Input to Output	3	9	ns

SWITCHING WAVEFORMS