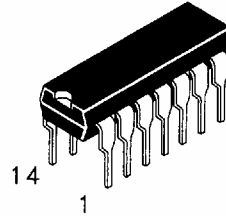


## Hex Inverting Drivers with Open Collector Outputs

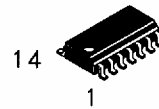
This device contains six independent drivers, each of which performs the logic INVERT/Complement function. The Outputs require external pull-up resistors for proper logical operations.

- 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

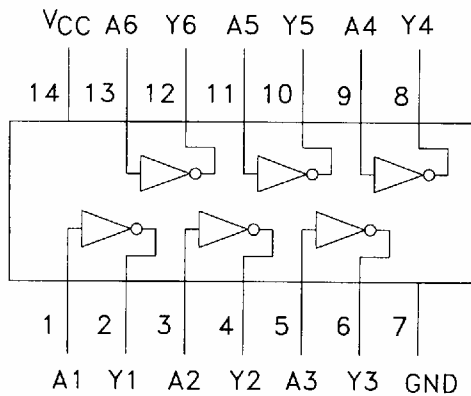
### DV74ALS1005



N Suffix  
Plastic DIP  
AVG-001 Case



D Suffix  
Plastic SOP  
AVG-002 Case



#### TRUTH TABLE

Inputs	Outputs
A	Y
L	H
H	L

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	ALS1005	Unit
V <sub>CC</sub>	Supply Voltage	7.0	V
V <sub>IN</sub>	Input Voltage	7.0	V
T <sub>STG</sub>	Storage Temperature Range	-65 to +150	°C

#### GUARANTEED OPERATING CONDITIONS

Symbol	Parameter	ALS1005		Unit
		Min	Max	
V <sub>CC</sub>	Supply Voltage	4.5	5.5	V
V <sub>IH</sub>	High Level Input Voltage	2.0		V
V <sub>IL</sub>	Low Level Input Voltage		0.8	V
V <sub>OH</sub>	High Level Output Voltage		5.5	V
I <sub>OL</sub>	Low Level Output Current		24	mA
T <sub>A</sub>	Ambient Temperature Range	-10 to +70		°C

**DC ELECTRICAL CHARACTERISTICS** over full operating conditions

Symbol	Parameter	Conditions	ALS1005			Unit
			Min	Typ	Max	
V <sub>IK</sub>	Input Clamp Voltage	V <sub>CC</sub> = min, I <sub>IN</sub> = -18 mA			-1.5	V
I <sub>OH</sub>	Output HIGH Current	V <sub>CC</sub> =min, V <sub>OH</sub> =5.5V			100	μA
V <sub>OL</sub>	Low Level Output Voltage	V <sub>CC</sub> =min I <sub>OL</sub> =12.0mA		0.25	0.4	V
				0.35	0.5	V
I <sub>IH</sub>	High Level Input Current	V <sub>CC</sub> =max, V <sub>IN</sub> =2.7V			20	μA
		V <sub>CC</sub> =max, V <sub>IN</sub> = 7.0V			0.1	mA
I <sub>IL</sub>	Low Level Input Current	V <sub>CC</sub> =max, V <sub>IN</sub> =0.4V			-0.1	mA
I <sub>CC</sub>	Supply Current V <sub>CC</sub> =max	Total, Output HIGH Total, Output LOW		0.9	3	mA
				7	12	mA

**SWITCHING CHARACTERISTICS** over full operating conditions

Symbol	Parameter	ALS1005 C <sub>L</sub> = 50 pF R <sub>L</sub> = 680Ω		Unit
		Min	Max	
t <sub>PLH</sub>	Turn Off Delay, Input to Output	5	30	ns
t <sub>PHL</sub>	Turn On Delay, Input to Output	2	10	ns

**SWITCHING WAVEFORMS**

