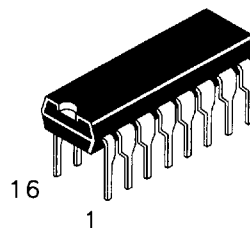


Dual 4-1 Data Selector/ Multiplexer

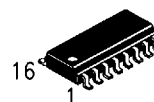
These devices are high speed Dual 4-input Multiplexer with Common Select inputs and individual Enable inputs for each section. They can select two bits of data from four sources. The 2 buffered outputs present data in the inverted form.

- AVG's LS operates over extended V_{CC} from 4.5 to 5.5 V
- AVG's LS and ALS both have guaranteed DC and AC specification over full temperature and V_{CC} 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
- Buffered 24mA Output Drive I_{OL}

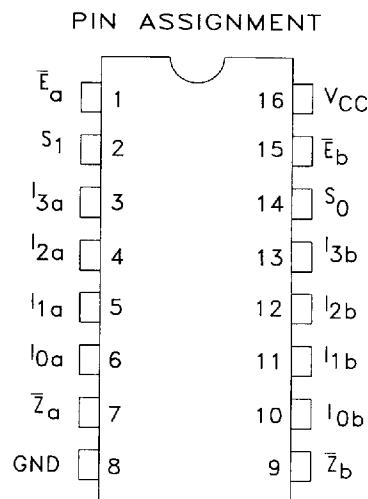
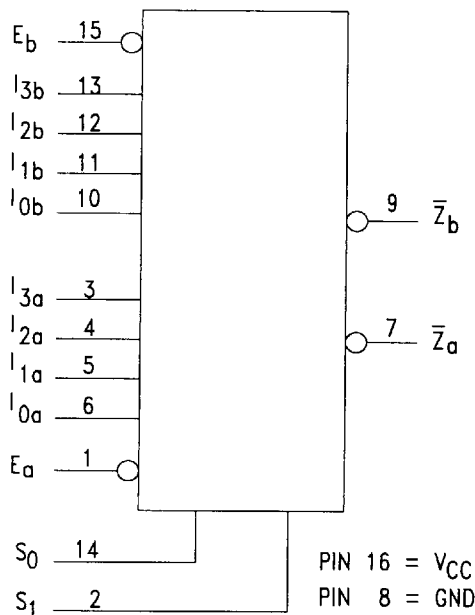
DV74LS352 DV74ALS352



N Suffix
Plastic DIP
AVG-003 Case



D Suffix
Plastic SOP
AVG-004 Case



TRUTH TABLE

Select Inputs		Inputs				Enable	Output
S0	S1	I0	I1	I2	I3		
X	X	X	X	X	X	H	H
L	L	L	X	X	X	L	H
L	L	H	X	X	X	L	L
H	L	X	L	X	X	L	H
H	L	X	H	X	X	L	L
L	H	X	X	L	X	L	H
L	H	X	X	H	X	L	L
H	H	X	X	X	L	L	H
H	H	X	X	X	H	L	L

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	LS352	ALS352	Unit
V _{CC}	Supply Voltage	7.0	7.0	V
V _{IN}	Input Voltage	-0.5 to +7.0	7.0	V
T _{STG}	Storage Temperature Range	-65 to +150	-65 to +150	°C

GUARANTEED OPERATING CONDITIONS

Symbol	Parameter	LS352		ALS352		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 _{OL}	Low Level Output Current		8.0		24	mA
I _{OH}	High Level Output Current		-0.4		-2.6	mA
T _A	Ambient Temperature Range	-10 to +70		-10 to +70		°C

DC ELECTRICAL CHARACTERISTICS over full operating conditions

Symbol	Parameter	Conditions	LS352			ALS352			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} =-0.4mA	V _{CC} -2	3.5		V _{CC} -2			V
		V _{CC} =min, I _{OH} =-2.6mA				2.4	3.2		
V _{OL}	Low Level Output Voltage	V _{CC} =min; I _{OL} =4.0mA		0.25	0.4				V
		V _{CC} =min; I _{OL} =8.0mA		0.35	0.5				
		V _{CC} =min; I _{OL} =12mA					0.25	0.4	
		V _{CC} =min; I _{OL} =24mA					0.35	0.5	
I _{IH}	High Level Input Current	V _{CC} =max, V _{IN} =2.7V			20			20	μA
	High Level Input Current	V _{CC} =max, V _{IN} = 7.0V			0.1			0.1	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 =2.25 V	-20		-100	-30		-112	mA
I _{CC}	Supply Current	V _{CC} =max			10		6.5	10	mA

SWITCHING CHARACTERISTICS

Symbol	Parameter	LS352 C _L =15pF			ALS352 C _L = 50 pF R _L = 500Ω			Unit
		Min	Typ	Max	Min	Typ	Max	
t _{PLH}	Propagation Delay, Data to Output			20	3		18	ns
t _{PHL}				26	2		13	
t _{PLH}	Propagation Delay, Select to Output			29	5		24	ns
t _{PHL}				38	5		21	
t _{PLH}	Propagation Delay, Enable to Output			24	4		18	ns
t _{PHL}				32	4		20	

SWITCHING WAVEFORMS