

PRELIMINARY DATA SHEET

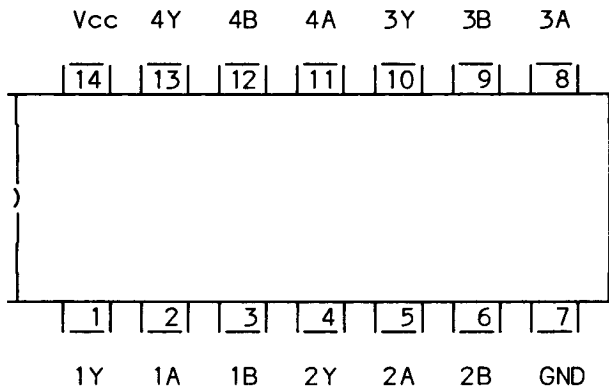
ADVANCED LOW-POWER  
SCHOTTKY TTL

TYPES SN54ALS902 and SN74ALS902  
QUAD 2-INPUT NOR BUFFERS

- \* QUAD 2-INPUT NOR BUFFERS
- \* ADVANCED OXIDE-ISOLATED, ION-IMPLANTED SCHOTTKY TTL PROCESS
- \* FUNCTIONALLY and PIN-for-PIN COMPATIBLE with TTL COUNTERPART
- \* IMPROVED AC PERFORMANCE over LS COUNTERPART
- \* HALF the POWER of LS COUNTERPART
- \* IMPROVED INPUT THRESHOLD VOLTAGE
- \* IMPROVED LINE RECEIVING CHARACTERISTICS

ELECTRICAL PINOUT

positive logic:  $Y = \overline{A+B}$



This advanced low-power Schottky device has been fabricated by an advanced oxide-isolated, ion-implanted Schottky TTL process developed by TI. The major benefit of this process is the improvement of the speed-power product by the reduction of parasitic and side-wall capacitance and enhanced  $f_t$ . The ALS family features the same output drive characteristics as the LS family.

switching characteristics  $V_{cc}=5V, T_a=25^\circ C, C_l=50pF, R_l=667ohms$

PARAMETER	SN54ALS902		SN74ALS902		UNIT
	min	typ max	min	typ max	
t <sub>plh</sub> Propagation delay time, low-to-high-level output	4.8		4.8		ns
t <sub>p<sub>hl</sub></sub> Propagation delay time, high-to-low-level output	4.3		4.3		ns

supply current over recommended operating free-air temperature range

PARAMETER	TEST CONDITIONS	SN54ALS902		SN74ALS902		UNIT
		typ	max	typ	max	
I <sub>cch</sub> Supply current, outputs high	$V_{cc}=MAX, V_i=0V$	1.7	3.1	1.7	3.1	mA
I <sub>ccl</sub> Supply current, outputs low	$V_{cc}=MAX, V_i=4.5V$	4.8	8.8	4.8	8.8	mA

PARAMETER		SN54ALS902		SN74ALS902		UNIT
		min	max	min	max	
I <sub>o†</sub> Output drive current	$V_{cc}=MAX, V_i=0V$	-15	-70	-15	-70	mA

† The output voltage conditions have been chosen to produce a current that closely approximates one-half of the true short-circuit output current, I<sub>os</sub>.