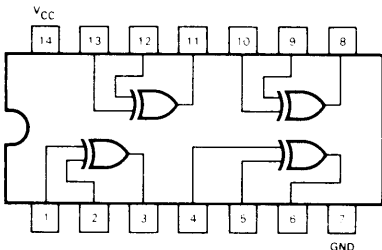


**MOTOROLA****SN54LS86
SN74LS86**

TRUTH TABLE

IN		OUT
A	B	Z
L	L	L
L	H	H
H	L	H
H	H	L

**QUAD 2-INPUT
EXCLUSIVE OR GATE**
LOW POWER SCHOTTKY

J Suffix — Case 632-07 (Ceramic)

N Suffix — Case 646-05 (Plastic)

GUARANTEED OPERATING RANGES

SYMBOL	PARAMETER		MIN	TYP	MAX	UNIT
V _{CC}	Supply Voltage	54 74	4.5 4.75	5.0 5.0	5.5 5.25	V
T _A	Operating Ambient Temperature Range	54 74	-55 0	25 25	125 70	°C
I _{OH}	Output Current — High	54, 74			-0.4	mA
I _{OL}	Output Current — Low	54 74			4.0 8.0	mA

DC CHARACTERISTICS OVER OPERATING TEMPERATURE RANGE (unless otherwise specified)

SYMBOL	PARAMETER		LIMITS			UNITS	TEST CONDITIONS
			MIN	TYP	MAX		
V _{IH}	Input HIGH Voltage		2.0			V	Guaranteed Input HIGH Voltage for All Inputs
V _{IL}	Input LOW Voltage	54			0.7	V	Guaranteed Input LOW Voltage for All Inputs
		74			0.8		
V _{IK}	Input Clamp Diode Voltage			-0.65	-1.5	V	V _{CC} = MIN, I _{IN} = -18 mA
V _{OH}	Output HIGH Voltage	54	2.5	3.5		V	V _{CC} = MIN, I _{OH} = MAX, V _{IN} = V _{IH} or V _{IL} per Truth Table
		74	2.7	3.5		V	
V _{OL}	Output LOW Voltage	54, 74		0.25	0.4	V	I _{OL} = 4.0 mA V _{CC} = V _{CC} MIN, V _{IN} = V _{IL} or V _{IH} per Truth Table
		74		0.35	0.5	V	
I _{IH}	Input HIGH Current				40	μA	V _{CC} = MAX, V _{IN} = 2.7 V
I _{IL}					0.2	mA	V _{CC} = MAX, V _{IN} = 7.0 V
I _{IL}	Input LOW Current				-0.8	mA	V _{CC} = MAX, V _{IN} = 0.4 V
I _{OS}	Short Circuit Current		-20		-100	mA	V _{CC} = MAX
I _{CC}	Power Supply Current				10	mA	V _{CC} = MAX

AC CHARACTERISTICS: T_A = 25°C

SYMBOL	PARAMETER	LIMITS			UNITS	TEST CONDITIONS
		MIN	TYP	MAX		
tPLH	Propagation Delay, Other Input LOW		12	23	ns	VCC = 5.0 V CL = 15 pF
tPHL			10	17		
tPLH	Propagation Delay, Other Input HIGH		20	30	ns	
tPHL			13	22		