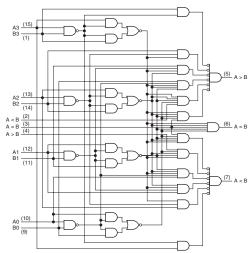
Logic Diagram (SN74)

4-BIT MAGNITUDE COMPARATORS



FUNCTION TABLE (SN74)

COMPARING INPUTS				CASCADING INPUTS			OUTPUTS			
A3, B3	A2, B2	A1, B1	A0, B0	A>B	A <b< th=""><th>A=B</th><th>A>B</th><th>A<b< th=""><th>A=B</th></b<></th></b<>	A=B	A>B	A <b< th=""><th>A=B</th></b<>	A=B	
A3>B3	Х	Х	Х	Х	Х	Х	Н	L	L	
A3 <b3< td=""><td>Х</td><td>X</td><td>Х</td><td>Х</td><td>X</td><td>X</td><td>L</td><td>Н</td><td>L</td></b3<>	Х	X	Х	Х	X	X	L	Н	L	
A3=B3	A2>B2	X	Х	Х	X	X	Н	L	L	
A3=B3	A2 <b2< td=""><td>X</td><td>Х</td><td>Х</td><td>X</td><td>X</td><td>L</td><td>Н</td><td>L</td></b2<>	X	Х	Х	X	X	L	Н	L	
A3=B3	A2=B2	A1>B1	Х	Х	X	X	Н	L	L	
A3=B3	A2=B2	A1 <b1< td=""><td>Х</td><td>Х</td><td>X</td><td>X</td><td>L</td><td>Н</td><td>L</td></b1<>	Х	Х	X	X	L	Н	L	
A3=B3	A2=B2	A1=B1	A0>B0	Х	X	X	Н	L	L	
A3=B3	A2=B2	A1=B1	A0 <b0< td=""><td>Х</td><td>X</td><td>X</td><td>L</td><td>Н</td><td>L</td></b0<>	Х	X	X	L	Н	L	
A3=B3	A2=B2	A1=B1	A0=B0	н	L	L	Н	L	L	
A3=B3	A2=B2	A1=B1	A0=B0	L	Н	L	L	Н	L	
A3=B3	A2=B2	A1=B1	A0=B0	н	Н	L	L	L	L	
A3=B3	A2=B2	A1=B1	A0=B0	L	L	L	Н	Н	L	
A3=B3	A2=B2	A1=B1	A0=B0	Х	Х	Н	L	L	Н	

ELECTRICAL CHARACTERISTICS AND RECOMMENDED OPERATING CONDITIONS

PARAMETER	MAX or MIN	TTL	LS	s	SN74 HC	CD74 HC	CD74 HCT	UNIT
Icc	MAX	88	20	115	0.08	0.16	0.16	mA
Іон	MAX	-0.4	-0.4	-1	-4	-4	-4	mA
loL	MAX	16	8	20	4	4	4	mA

SWITCHING CHARACTERISTICS

INPUT	OUTPUT	Nunber of Gate Levels	MAX or MIN	TTL	LS	s	SN74 HC	CD74 HC	CD74 HCT
Any A or B data input	A < B, A > B	3	MAX	26	36	16	58	59	56
	A = B	4	MAX	35	45	18	50	53	60
Any A or B data input	A < B, A > B	3	MAX	30	30	16.5	58	59	56
	A = B	4	MAX	30	45	16.5	50	53	60
A < B, A = B	A > B	1	MAN	11	22	7.5	44	42	45
A < B, A = B	A > B	1	IVIAA	17	17	8.5	44	42	45
A = B	A = B	2	MAN	20	20	10.5	37	-	-
A = B	A = B	2	IVIAA	17	26	7.5	37	-	-
A > B, A = B	A < B	1	MAN	-11	22	7.5	44	42	45
A > B, A = B	A < B	1	IVIAX	17	17	8.5	44	42	45
	Any A or B data input Any A or B data input A < B, A = B A < B, A = B A = B A = B A > B, A = B	Any A or B data input A = B Any A or B data input A = B A < B, A > B A < B, A > B A < B, A > B A < B, A = B A < B, A = B A > B A = B A = B A = B A = B A = B A = B A = B A = B A = B A = B A > B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B	Any A or B data input	Any A or B data input	Any A or B data input A = B 4 MAX 35 Any A or B data input A = B 4 MAX 35 Any A or B data input A = B 4 MAX 35 Ac B, A = B A > B 1 MAX 30 A < B, A = B A > B 1 MAX 30 A < B, A = B A > B 1 MAX 30 A < B, A = B A > B 1 MAX 30 A < B, A = B A > B 1 MAX 30 A < B, A = B A > B 1 MAX 30 A < B, A = B A > B 1 MAX 30 A < B, A = B A > B 1 MAX 30 A < B, A = B A = B 2 MAX 30 A = B A = B 2 MAX 30 A < B, A = B A = B 2 MAX 30 A < B, A = B A = B 2 MAX 30 A < B, A = B A = B A < B 1 MAX 30 A < B, A = B A = B A < B 1 MAX 30 A < B, A = B A = B A < B 1 MAX 30 A < B, A = B A < B A < B 1 MAX 30 A < B, A = B A < B A < B 1 MAX 30 A < B, A = B A < B A < B 1 MAX 30 A < B, A = B A < B A < B 1 MAX 30 A < B, A = B A < B A < B 1 MAX 30 A < B, A = B A < B A < B 1 MAX 30 A < B, A = B A < B A < B 1 MAX 30 A < B, A = B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B A < B	Any A or B data input	Any A or B data	Any A or B data input A = B 4 MAX 30 30 16.5 58 input A = B 4 MAX 30 30 16.5 58 input A = B 4 MAX 30 45 16.5 50 AC A = B A > B 1 MAX 30 45 16.5 50 AC A = B A > B 1 MAX 17 17 17 8.5 44 A = B A	Any A or B data input A = B 4 MAX 30 45 116 58 59 input A = B 4 MAX 30 45 116 55 50 53 Arg A or B data input A = B 4 MAX 30 45 18 50 53 Arg A or B data A < B, A > B 3 MAX 30 30 16.5 58 59 input A = B 4 MAX 30 45 16.5 50 53 Arg A or B data A < B A > B 1 MAX 30 45 16.5 50 53 Arg A or B data A < B A > B 1 MAX 30 45 16.5 50 53 Arg A or B data A < B A > B 1 MAX 11 22 7.5 44 42 Arg A = B

UNIT: ns