

SIGNETICS INTEGRATED CIRCUITS
Low Power Schottky TTL 54LS00- 74LS00 Series

Rating	Value	Unit
Supply Voltage - V_{CC}	+7.0	V
Input Voltage Range - V_I	-0.5 to +7.0	V
Output Voltage - V_{out}	+5.5	V
Operating Temperature Range	-55 to +125	°C
Storage Temperature Range	-65 to +150	°C

Function	Type/Pkg	Supply Current/typmA	Propagation Delay/typns
Quad 2-Input NAND Gate	54LS00/C,D	1.6	9.5
Quad 2-Input NAND Gate (O.C.)	54LS01/C,D	1.6	16
Quad 2-Input NOR Gate	54LS02/C,D	2.2	10
Hex Inverter	54LS04/C,D	2.4	9.5
Hex Inverter (Open Collector)	54LS05/C,D	2.4	17
Quad 2-Input AND Gate	54LS08/C,D	3.4	9
Quad 2-Input AND Gate (O.C.)	54LS09/C,D	—	—
Triple 3-Input NAND Gate	54LS10/C,D	1.2	10
Triple 3-Input AND Gate	54LS11/C,D	2.6	9
Dual 4-Input NAND Schmitt Trigger	54LS13/C,D	3.5	17
Hex Inverter Schmitt Trigger	54LS14/C,D	10	15
Dual 4-Input NAND Gate	54LS20/C,D	0.8	10
Dual 4-Input AND Gate	54LS21/C,D	1.7	9
Quad 2-Input NAND Gate (O.C.)	54LS26/C,D	1.6	16
Triple 3-Input NOR Gate	54LS27/C,D	2.7	10
8-Input NAND Gate	54LS30/C,D	0.5	11
2-Input OR Gate	54LS32/C,D	4.0	14
Quad 2-Input NOR Buffer (O.C.)	54LS33/C,D	4.0	19
Quad 2-Input NAND Buffer	54LS37/C,D	3.5	12
Quad 2-Input NAND Buffer (O.C.)	54LS38/C,D	3.5	19
Dual 4-Input NAND Buffer	54LS40/C,D	1.8	12
BCD-to-Decimal Decoder (1-of-10)	54LS42/E,F	7.0	18
Dual 2-Wide 2-Input AND-OR-INVERT Gate	54LS51/C,D	1.1	12

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4-Wide 2-Input AND-OR-INVERT Gate	54LS54/C,D	0.9	12
Dual J-K Flip-Flop	54LS73/C,D	4.0	—
Dual D-Type Flip-Flop	54LS74A/C,D	4.0	—
Dual 2-Bit Transparent Latch	54LS75/E,F	6.3	15
Dual J-K Flip-Flop	54LS76/E,F	4.0	—
4-Bit Full Adder	54LS83A/E,F	19.0	—
4-Bit Magnitude Comparator	54LS85/E,F	10.0	23
Quad 2-Input Exclusive-OR Gate	54LS86/C,D	6.1	10
Decade Counter	54LS90/C,D	9.0	—
Divide-By-Twelve Counter	54LS92/C,D	9.0	—
4-Bit Binary Ripple Counter	54LS93/C,D	9.0	—
4-Bit Shift Register	54LS95B/C,D	13.0	—
5-Bit Shift Register	54LS96/E,F	12.0	25
Dual J-K Flip-Flop	54LS107/C,D	4.0	—
Dual J-K Positive Edge-Triggered Flip-Flop	54LS109/E,F	4.0	—
Dual J-K Edge-Triggered Flip-Flop	54LS112/E,F	4.0	—
Dual J-K Edge-Triggered Flip-Flop	54LS113/C,D	4.0	—
Quad 3-State Buffer	54LS125/C,D	11.0	8
Quad 3-State Buffer	54LS125A/C,D	11.0	8
Quad 3-State Buffer	54LS126A/C,D	12.0	9
Quad 2-Input NAND Schmitt Trigger	54LS132/C,D	7.0	15
Quad 2-Input Exclusive-OR Gate (O.C.)	54LS136/C,D	6.1	18
1-of-8 Decoder/Demultiplexer	54LS138/E,F	6.3	20
Dual 1-of-4 Decoder/Demultiplexer	54LS139/E,F	6.8	19
8-Input Multiplexer	54LS151/E,F	6.0	12
Dual 4-Line to 1-Line Multiplexer	54LS153/E,F	6.2	18

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1-of-16 Decoder/Demultiplexer	54LS154/J,K	9.0	15
Dual 2-Line to 4-Line Decoder/Demultiplexer	54LS155/E,F	6.1	17
Dual 2-Line to 4-Line Decoder/Demultiplexer (O.C.)	54LS156/E,F	6.1	31
Quad 2-Input Data Selector/Multiplexer	54LS157/E,F	9.7	13
Quad 2-Input Data Selector/Multiplexer (Inverted)	54LS158/E,F	4.8	13
BCD Decade Counter	54LS160A/E,F	19.0	—
4-Bit Binary Counter	54LS161A/E,F	19.0	—
BCD Decade Counter	54LS162A/E,F	19.0	—
4-Bit Binary Counter	54LS163A/E,F	19.0	—
8-Bit Serial-In Parallel-Out Shift Register	54LS164/C,D	16.0	—
4-Bit Up/Down Synchronous Counter	54LS169A/E,F	20.0	—
4 x 4 Register File (Open Collector)	54LS170/E,F	25.0	20
Quad D-Type Flip-Flop	54LS173/E,F	20.0	—
Hex D Flip-Flop	54LS174/E,F	16.0	—
Quad D Flip-Flop	54LS175/E,F	11.0	—
4-Bit Arithmetic Logic Unit	54LS181/J,K	21.0	22
Presettable 4-Bit Binary Up/Down Counter	54LS191/E,F	20.0	—
Presettable BCD Decade Up/Down Counter	54LS192/E,F	19.0	—
Presettable 4-Bit Binary Up/Down Counter	54LS193/E,F	19.0	—
4-Bit Bidirectional Universal Shift Register	54LS194A/E,F	15.0	—
Presettable 4-Bit Binary Ripple Counter	54LS197/C,D	16.0	—
Octal Inverter Buffer (3-State)	54LS240/R	24.0	11
Octal Buffer (3-State)	54LS241/R	25.0	12
Quad Inverting			

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Transceiver (3-State)	54LS242/C,D	27.0	10
Quad Transceiver (3-State)	54LS243/C,D	28.0	12
Octal Buffer (3-State)	54LS244/R	25.0	12
Octal Transceiver (3-State)	54LS245/R	58.0	8
8-Input Multiplexer (3-State)	54LS251/E,F	9.0	18
Dual 4-Input Multiplexer (3-State)	54LS253/E,F	8.0	15
Dual 4-Bit Addressable Latch	54LS256/E,F	22.0	19
Quad 2-Line to 1-Line Data Selector/Multiplexer (3-State)	54LS257A/E,F	9.0	13
Quad 2-Line to 1-Line Data Selector/Multiplexer (3-State)	54LS258A/E,F	9.0	13
8-Bit Addressable Latch	54LS259/E,F	22.0	19
Dual 5-Input NOR Gate	54LS260/C,D	4.0	9
Quad 2-Input Exclusive-NOR Gate	54LS266/C,D	8.0	18
Octal D Flip-Flop	54LS273/R	17.0	—
4-Bit Full Adder w/Fast Carry	54LS283/E,F	20.0	13
4-Bit Shift Register w/3-State Outputs	54LS295B/C,D	17.0	—
Quad 2-Port Register	54LS298/E,F	13.0	19
256-Bit TTL RAM (256x1)	54LS301/E,F	—	—
Dual 4-Line to 1-Line Multiplexer	54LS352/E,F	6.2	15
Dual 4-Input Multiplexer (3-State)	54LS353/E,F	8.0	12
Octal Transparent Latch (3-State)	54LS363/R	42.0	19
Octal D Type Flip-Flop (3-State)	54LS364/R	42.0	—
Hex Buffer/Driver (3-State)	54LS365A/E,F	14.0	10
Hex Inverter Buffer (3-State)	54LS366A/E,F	12.0	10
Hex Buffer/Driver (3-State)	54LS367A/E,F	14.0	10
Hex Inverter Buffer (3-State)	54LS368A/E,F	12.0	10
Octal Transparent Latch w/3-State Outputs	54LS373/R	24.0	19
Octal D Type Flip-Flop w/3-State Outputs	54LS374/R	27.0	19

Function	Type/Pkg	Supply Current/typmA	Propagation Delay/typns
Dual 2-Bit Transparent Latch	54LS375/E,F	6.3	12
Octal D Type Flip-Flop w/Clock Enable	54LS377/R	20.0	—
Hex D Type Flip-Flop w/Clock Enable	54LS378/E,F	15.0	—
Dual Decade Ripple Counter	54LS390/E,F	15.0	—
Dual 4-Bit Binary Ripple Counter	54LS393/C,D	15.0	—
4-Bit Cascadable Shift Register w/3-State Outputs	54LS395A/E,F	19.0	—
BCD-to-Decimal Decoder/Driver (O.C.)	54LS445/E,F	7.0	39
Dual BCD Decade Ripple Counter	54LS490/E,F	15.0	—
Inverting Octal D Latch (3-State)	54LS533/R	—	—
Inverting Octal D Flip-Flop (3-State)	54LS534/R	—	—
Octal Buffer/Line Driver (3-State)	54LS540/R	22.0	9
Octal Buffer/Line Driver (3-State)	54LS541/R	23.0	10
4-Bit Binary Up/Down Synchronous Counter (3-State)	54LS569A/R	28.0	—
Inverting Octal Bus Transceiver (3-State)	54LS620/R	73.6	9
Non-Inverting Octal Bus Transceiver (O.C.)	54LS621/R	54.5	19
Inverting Octal Bus Transceiver (O.C.)	54LS622/R	54.5	19
Non-Inverting Octal Bus Transceiver (3-State)	54LS623/R	73.6	9
Inverting Octal Bus Transceiver (3-State)	54LS640/R	58.0	7
Inverting Octal Bus Transceiver (3-State)	54LS640-1/R	58.0	7
Octal Bus Transceiver (O.C.)	54LS641/R	58.0	17
Octal Bus Transceiver (O.C.)	54LS641-1/R	58.0	17
Octal Bus Transceiver (O.C.)	54LS642/R	58.0	17
Octal Bus Transceiver (O.C.)	54LS642-1/R	58.0	17

Function	Type/Pkg	Supply Current/typmA	Propagation Delay/typns
Octal Bus Transceiver (O.C.)	54LS645/R	58.0	10
Octal Bus Transceiver (O.C.)	54LS645-1/R	58.0	10
4 x 4 Register File (3-State)	54LS670/E,F	30.0	25
Bit Stream Manager	74LS1801/J	—	—