



**MOTOROLA  
INTEGRATED CIRCUITS**  
54H00 Series  
74H00 Series

TTL III circuits comprise a family of transistor-transistor logic designed for general purpose digital applications. The family has a high operating speed, good external noise immunity and high fan-out.

**MAXIMUM RATINGS**

Rating	Value	Unit
Supply Voltage - $V_{CC}$	7.0	V
Input Voltage - $V_{in}$	5.5	V
Output Voltage - $V_{out}$	5.5	V
Operating Free-Air Temperature Range	-55 to +125	°C

**PACKAGING AVAILABLE**

(See page 88):

**C - 14-LEAD DUAL INLINE    A - 14-LEAD FLAT PACK**

**FUNCTIONS AND  
CHARACTERISTICS**

FUNCTION	TYPE/PKG	LOADING FACTOR EACH OUTPUT	POWER DISSIPATION mW typ/pkg
Quad 2-Input Positive NAND Gate	54H00/C,A	10	88
Quad 2-Input Positive NAND Gate (O.C.)	54H01/C,A	10	88
Quad 2-Input NOR Gate	54H02/C,A	10	122
Hex Inverter	54H04/C,A	10	140
Hex Inverter	54H05/C,A	10	90
Quad 2-Input Positive AND Gate	54H08/C,A	10	112
Triple 3-Input Positive NAND Gate	54H10/C,A	10	66
Triple 3-Input Positive AND Gate	54H11/C,A	10	84
Triple 3-Input NAND Gate (O.C.)	54H12/C,A	10	66
Dual 4-Input Positive NAND Gate	54H20/C,A	10	44
Dual 4-Input AND Gate	54H21/C,A	10	56
Dual 4-Input NAND Gate (O.C.)	54H22/C,A	10	44
Dual 3-Input 3-Output AND Series Terminated Line Driver	54H28/C,A	—	56
Dual 3-Input 3-Output NAND Series Terminated Line Driver	54H29/C,A	—	44
8-Input Positive NAND Gate	54H30/C,A	10	22
8-Input NAND Gate	54H31/C,A	10	22
Quad 2-Input OR Gate	54H32/C,A	10	150

TTL III

**TTL III** FUNCTIONS AND CHARACTERISTICS (continued)

FUNCTION	TYPE/PKG	LOADING FACTOR EACH OUTPUT	POWER DISSIPATION mW typ/pkg
Dual 4-Input NAND Power Gate	54H36/C,A	20	70
Dual 4-Input AND Power Gate	54H39/C,A	20	90
Dual 4-Input Positive NAND Buffer Gate	54H40/C,A	30	90
Expandable Dual 2-Wide 2-Input A.O.I. Gate	54H50/C,A	10	62.5
Dual 2-Wide 2-Input AND-OR-INVERT Gate	54H51/C,A	10	62.5
Expandable 4-Wide 2-2-2-3 Input A.O.I. Gate	54H52/C,A	10	87.5
Expandable 4-Wide 2-2-2-3 Input A.O.I. Gate	54H53/C,A	10	40
4-Wide 2-2-2-3 Input AND-OR-INVERT Gate	54H54/C,A	10	40
Expandable 2-Wide 4-Input AND-OR-INVERT Gate	54H55/C,A	10	30
Dual 4-Input Expander for AND-OR-INVERT Gates	54H60/C,A	10	15
Triple 3-Input Expander for AND-OR Gates	54H61/C,A	10	25
4-Wide 3-2-2-3 Input Expander for A.O.I. Gates	54H62/C,A	10	40
OR Input J-K Flip-Flop	54H71/C,A	10	95
AND Input J-K Flip-Flop	54H72/C,A	10	80
Dual J-K Master-Slave Flip-Flop	54H73/C,A	10	176
Dual Type D Edge-Triggered Flip-Flop	54H74/C,A	—	—
Dual Type D Flip-Flop	54H79/C,A	10	120
Quad 2-Input Exclusive OR Gate	54H86/C,A	8	100
4-Bit True/Complement Zero/One Element	54H87/C,A	—	—
Quad 2-Input Exclusive NOR Gate	54H89/C,A	8	85
J-K Edge-Triggered Flip-Flop	54H101/C,A	—	—
J-K Edge-Triggered Flip-Flop with AND Inputs	54H102/C,A	—	—
Dual J-K Edge-Triggered Flip-Flop	54H103/C,A	—	—
Dual J-K Edge-Triggered Flip-Flop	54H108/C,A	—	—
AND J-K Flip-Flop	54H116/C,A	10	50
AND Input JJ-KK Flip-Flop	54H117/C,A	10	75
Dual J-K Flip-Flop	54H119/C,A	10	100
Dual J-K Flip-Flop	54H120/C,A	10	100

# PACKAGING INFORMATION

## Per MIL-M-38510 Package Case Outline

All of Lansdale's products come in one of the following configurations. On each of the product pages in the catalog, there is a package box. The letters in that box correspond to one of the letters below. This is a guide to how the product is available.

LETTER	DESIGNATION	DESCRIPTION
A	F-1	14-LEAD FP (1/4" X 1/4")
B	F-3	14-LEAD FP (3/16" X 1/4")
C*	D-1	14-LEAD DIP (1/4" X 3/4")
D*	F-2	14-LEAD FP (1/4" X 3/8")
E*	D-2	16-LEAD DIP (1/4" X 7/8")
F*	F-5	16-LEAD FP (1/4" X 3/8")
G	A-1	8-LEAD CAN
H*	F-4	10-LEAD FP (1/4" X 1/4")
I*	A-2	10-LEAD CAN
J*	D-3	24-LEAD DIP (1/2" X 1 1/4")
K*	F-6	24-LEAD FP (3/8" X 5/8")
L	D-9	24-LEAD DIP (1/4" X 1 1/4")
M	A-3	12-LEAD CAN
P	D-4	8-LEAD DIP (1/4" X 3/8")
Q	D-5	40-LEAD DIP (9/16" X 2 1/16")
R	D-8	20-LEAD DIP (1/4" X 1 1/16")
S	F-9	20-LEAD FP (1/4" X 1/2")
V	D-6	18-LEAD DIP (1/4" X 15/16")
W	D-7	22-LEAD DIP (3/8" X 1 1/8")

FP (flat pack)  
DIP (dual inline)  
CAN (metal can)

\* **LANSDALE STANDARD PACKAGES**

**CONTACT FACTORY FOR OTHER PACKAGE QUOTES**