



**MOTOROLA
INTEGRATED CIRCUITS
CMOS**

These CMOS integrated circuits meet the minimum values for the industry-standardized family specifications as coordinated by the EIA/JEDEC Solid-State Products Council.

**FUNCTIONS AND
CHARACTERISTICS**

MAXIMUM RATINGS

| Rating | Value | Unit |
|--------------------------------------|------------------------|------|
| DC Supply Voltage - V_{DD} | -0.5 to +18 | Vdc |
| Input Voltage, All Inputs - V_{in} | -0.5 to $V_{DD} + 0.5$ | Vdc |
| DC Current Drain per Pin | 10 | mAdc |
| Operating Temperature Range | -55 to +125 | °C |
| Storage Temperature Range | -65 to +150 | °C |

PACKAGING AVAILABLE

(See page 88):

C - 14-LEAD DUAL INLINE

E - 16-LEAD DUAL INLINE

J - 24-LEAD DUAL INLINE

CMOS

| FUNCTION | TYPE/PKG | INPUT CURRENT | PROPAGATION DELAY ns/typ |
|------------------------------------|----------|---------------|--------------------------|
| Dual 4-Input NOR Gate | 14002B/C | 15 | 50 |
| 18 Bit Static Shift Register | 14006B/C | 15 | 80 |
| 4-Bit Full Adder | 14008B/E | 15 | 115 |
| Octal Counter/Divider | 14022B/E | 15 | 175 |
| 8-Bit Universal Bus Register | 14034B/J | 15 | 145 |
| 4-Bit Shift Register | 14035B/E | 15 | 95 |
| 8-Input NAND Gate | 14068B/C | 15 | 60 |
| 8-Input NOR Gate | 14078B/C | 15 | 60 |
| Decade Counter (Synchronous Clear) | 14162B/E | 15 | 100 |
| Binary Counter (Synchronous Clear) | 14163B/E | 15 | 100 |
| 4-Bit Universal Shift Register | 14194B/E | 15 | 85 |
| Dual Expandable AND-OR-INVERT Gate | 14506A/E | 15 | 65 |
| Dual 4-Bit Latch | 14508B/J | 15 | 60 |
| BCD Up/Down Counter | 14510B/E | 15 | 100 |
| 4-Bit Latch/4-to-16 Line Decoder | 14514B/J | 15 | 150 |
| 4-Bit Latch/4-to-16 Line Decoder | 14515B/J | 15 | 150 |
| Binary Up/Down Counter | 14516B/E | 15 | 100 |

CMOS FUNCTIONS AND CHARACTERISTICS (continued)

| FUNCTION | TYPE/PKG | INPUT CURRENT | PROPAGATION DELAY ns/typ |
|---|----------|---------------|--------------------------|
| 24-Stage Frequency Divider | 14521B/E | 15 | 375 |
| Programmable BCD Divide-by-N Counter | 14522B/E | 15 | 160 |
| 1024-Bit (256 X 4) Read Only Memory | 14524B/E | 15 | — |
| Programmable Binary Divide-By-N Counter | 14526B/E | 15 | 160 |
| Dual 4-Channel Analog Data Selector | 14529B/E | 15 | 50 |
| 12-Bit Parity Tree | 14531B/E | 15 | 120 |
| Successive Approximation Register | 14549B/E | 15 | 155 |
| Quad 2-Channel Analog Mux | 14551B/E | — | 120 |
| 3-Digit BCD Counter | 14553B/E | 15 | — |
| Dual Binary to 1-of-4 Decoder (Inverting) | 14556B/E | 15 | 70 |
| Successive Approximation Register | 14559B/E | 15 | 155 |
| NBCD Adder | 14560B/E | 15 | 170 |
| 9's Complementer | 14561B/C | 15 | 65 |
| 128-Bit Static Shift Register | 14562B/C | 15 | 170 |
| Phase Comparator Programmable Counter | 14568B/E | 15 | — |



PACKAGING INFORMATION

Per MIL-M-38510 Package Case Outline

Lansdale's products come in 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 provides a description of the packages.

| LETTER | DESIGNATION | DESCRIPTION |
|--------|-------------|---------------------------------------|
| A | F-1 | 14-LEAD FLAT PACK (1/4" X 1/4") |
| B | F-3 | 14-LEAD FLAT PACK (3/16" X 1/4") |
| C | D-1 | 14-LEAD DUAL INLINE (1/4" X 3/4") |
| D | F-2 | 14-LEAD FLAT PACK (1/4" X 3/8") |
| E | D-2 | 16-LEAD DUAL INLINE (1/4" X 7/8") |
| F | F-5 | 16-LEAD FLAT PACK (1/4" X 3/8") |
| G | A-1 | 8-LEAD CAN |
| H | F-4 | 10-LEAD FLAT PACK (1/4" X 1/4") |
| I | A-2 | 10-LEAD CAN |
| J | D-3 | 24-LEAD DUAL INLINE (1/2" X 1 1/4") |
| K | F-6 | 24-LEAD FLAT PACK (3/8" X 5/8") |
| L | D-9 | 24-LEAD DUAL INLINE (1/4" X 1 1/4") |
| M | A-3 | 12-LEAD CAN |
| N | D-14 | 48-LEAD DUAL INLINE |
| P | D-4 | 8-LEAD DUAL INLINE (1/4" X 3/8") |
| Q | D-5 | 40-LEAD DUAL INLINE (9/16" X 2 1/16") |
| R | D-8 | 20-LEAD DUAL INLINE (1/4" X 1 1/16") |
| S | F-9 | 20-LEAD FLAT PACK (1/4" X 1/2") |
| T | D-12 | 50-LEAD DUAL INLINE |
| U | D-13 | 64-LEAD DUAL INLINE |
| V | D-6 | 18-LEAD DUAL INLINE (1/4" X 15/16") |
| W | D-7 | 22-LEAD DUAL INLINE (3/8" X 1 1/8") |
| Y | D-10 | 28-LEAD DUAL INLINE (1/2" X 1 1/2") |

CONTACT SALES FOR OTHER PACKAGE QUOTES