



**SIGNETICS  
INTEGRATED CIRCUITS  
10K ECL**

Emitter-coupled logic is the fastest logic technology available for practical use. A conventional planar process is used for the 10K ECL series with a density of about ten gates per mm<sup>2</sup> and a delay of 2 ns per gate.

**MAXIMUM RATINGS**

Rating	Value	Unit
Supply Voltage - $V_{CC}$	-8.0	V
Input Voltage - $V_{in}$	0 to $V_{EE}$	V
Output Source Current	-50	mA
Storage Temperature Range	-55 to +125	°C
Maximum Junction Temperature (Ceramic)	+165	°C

**PACKAGING AVAILABLE**  
(See page 88):  
**E - 16-LEAD DUAL INLINE**

**ECL**

**FUNCTIONS AND  
CHARACTERISTICS**

FUNCTION	TYPE/PKG	PROPAGATION DELAY typ ns	SUPPLY CURRENT typ mA
Quad 2-Input NOR Gate w/Strobe	10100/E	2.0	21
Quad 2-Input OR/NOR Gate w/Strobe	10101/E	2.0	20
Quad 2-Input NOR Gate	10102/E	2.0	20
Quad 2-Input OR Gate	10103/E	2.0	21
Quad 2-Input AND Gate	10104/E	2.7	20
Triple 2-3-2 Input OR/NOR Gate	10105/E	2.0	17
Triple 4-3-3 Input NOR Gate	10106/E	2.0	17
Triple 2-Input Exclusive OR/Exclusive NOR Gate	10107/E	2.8	22
Dual 4-Input AND/NAND Gate	10108/E	2.3	28
Dual 4-5 Input OR/NOR Gate	10109/E	2.0	11
Dual 3-Input/3-Output OR Gate	10110/E	2.4	30
Dual 3-Input/3-Output NOR Gate (Line Driver)	10111/E	2.4	29
Quad Exclusive OR Gate w/Enable	10113/E	2.6	34
Triple Differential Line Receiver	10114/E	2.4	28
Quad Differential Line Receiver	10115/E	2.0	18
Triple Differential Line Receiver	10116/E	2.4	17

**ECL** FUNCTIONS AND CHARACTERISTICS (continued)

FUNCTION	TYPE/PKG	PROPAGATION DELAY typ ns	SUPPLY CURRENT typ mA
Dual 2-Wide 2-3 Input OR-AND/OR-AND-INVERT Gate	10117/E	2.3	20
Dual 2-Wide 3-Input OR-AND Gate	10118/E	2.3	20
4-Wide 4-3-3-3 Input OR-AND Gate	10119/E	2.3	20
4-Wide OR-AND/OR-AND-INVERT Gate	10121/E	2.3	20
Triple 4-3-3 Input Bus Driver	10123/E	3.0	71
Quad TTL-to-ECL Translator	10124/E	3.5	53
Quad ECL-to-TTL Translator	10125/E	3.5	30
Bus Receiver	10129/E	—	—
Dual D Type Latch	10130/E	2.5	30
Dual D Type Master-Slave Flip-Flop	10131/E	3.0	45
Dual 2-Input Multiplexer w/Clocked Latch & Reset	10132/E	3.0	44
Quad Latch w/D Type Inputs & Enable Outputs	10133/E	4.0	59.6
Dual 2-Input Multiplexer w/Clocked D Type Latches	10134/E	3.0	42
Dual J-K Master-Slave Flip-Flop	10135/E	3.0	54
Universal Hexadecimal Counter	10136/E	3.3	120
Universal Decade Counter	10137/E	3.3	120
4-Bit Universal Shift Register	10141/E	2.9	82
Quad 2-to-1 Multiplexer (Non-Inverting)	10148/E	2.5	38
Quad 2-to-1 Multiplexer (Inverting)	10159/E	2.5	42
12-Bit Parity Checker/Generator	10160/E	5.0	62
1-of-8 Decoder w/2 Enable Inputs (Active Low Outputs)	10161/E	4.0	61
1-of-8 Decoder w/2 Enable Inputs (Active High Outputs)	10162/E	4.0	61
8-Input Multiplexer w/Enable Input	10164/E	3.0	60
8-Input Priority Encoder	10165/E	4.5	105
Dual 1-of-4 Decoder (Active Low Outputs)	10171/E	4.0	65
Dual 1-of-4 Decoder (Active High Outputs)	10172/E	4.0	62
Quad 2-Input Multiplexer w/Latched Outputs	10173/E	2.5	53
Dual 4-to-1 Multiplexer w/Output Enable	10174/E	3.5	58

**ECL** FUNCTIONS AND CHARACTERISTICS (continued)

<b>FUNCTION</b>	<b>TYPE/PKG</b>	<b>PROPAGATION DELAY typ ns</b>	<b>SUPPLY CURRENT typ mA</b>
Quint D-Latch w/Common Reset	10175/E	2.5	78
Hex D Type Master-Slave Flip-Flop	10176/E	—	88
Look-Ahead Carry Block	10179/E	2.3	58
Dual 2-Bit Adder/Subtractor	10180/E	—	70
4-Bit Arithmetic Logic Unit/Function Generator	10181/E	4.2	130
Hex Buffer w/Enable (Non-Inverting)	10188/E	2.0	33
Hex Inverter w/Enable	10189/E	2.0	30
Quad Bus Driver	10192/E	3.0	110
High-Speed Dual 3-Input/3-Output OR Line Driver	10210/E	1.5	31
High-Speed Dual 3-Input/3-Output NOR Line Driver	10211/E	1.5	30
Triple Differential OR/NOR Line Receiver	10216/E	1.5	20
Dual D Type Master-Slave Flip-Flop	10231/E	2.0	52



# 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**