

# 26LS31

## Quad High Speed Differential Line Driver

### Product Specification

Military Linear Products

#### ORDERING INFORMATION

PACKAGE	ORDER CODE
16-Pin CERDIP	26LS31/BEA

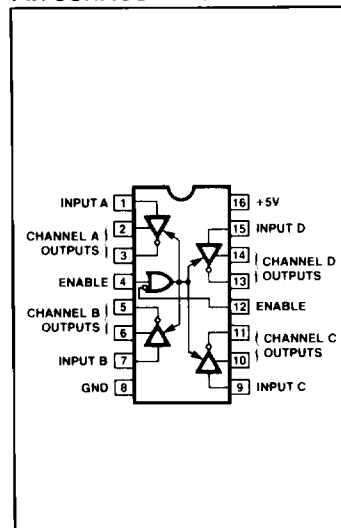
#### ABSOLUTE MAXIMUM RATINGS

SYMBOL	PARAMETER	LIMITS		UNIT
		Min	Max	
$T_{STG}$	Storage temperature range	-65	+150	°C
$V_{CC}$	Supply voltage		7.0	V
$V_I$	Input voltage		7.0	V
$V_O$	Output voltage		5.5	V

#### RECOMMENDED OPERATING CONDITIONS

SYMBOL	PARAMETER	LIMITS		UNIT
		Min	Max	
$T_A$	Operating temperature range	-55	+125	°C
$V_{CC}$	Supply voltage	4.5	5.5	V
$V_{IH}$	Input High threshold voltage	2.0		V
$V_{IK}$	Input Low threshold voltage		0.8	V

#### PIN CONFIGURATION



#### DC ELECTRICAL CHARACTERISTICS (Over recommended operating temperature and supply voltage range unless otherwise specified.)

SYMBOL	PARAMETER	CONDITIONS	LIMITS		UNITS
			Min	Max	
$V_{OH}$	Output High voltage	$V_{CC} = \text{Min}$ $I_{OH} = -20\text{mA}$	2.5		V
$V_{OL}$	Output Low voltage	$V_{CC} = \text{Min}$ $I_{OL} = 20\text{mA}$		0.5	V
$V_{IH}$	Input High voltage	$V_{CC} = \text{Min}$	2.0		V
$V_{IL}$	Input Low voltage	$V_{CC} = \text{Max}$		0.8	V
$I_{IL}$	Input Low current	$V_{CC} = \text{Max}$ $V_{IN} = 0.4\text{V}$		-0.36	mA
$I_{IH}$	Input High current	$V_{CC} = \text{Max}$ $V_{IN} = 2.7\text{V}$		20	$\mu\text{A}$
$I_I$	Input reverse current	$V_{CC} = \text{Max}$ $V_{IN} = 7.0\text{V}$		0.1	mA
$I_O$	Off-state (high impedance) output current	$V_{CC} = \text{Max}$	$V_O = 2.5\text{V}$	20	$\mu\text{A}$
			$V_O = 0.5\text{V}$	-20	$\mu\text{A}$
$V_I$	Input clamp voltage	$V_{CC} = \text{Min}$ $I_N = -18\text{mA}$		-1.5	V
$I_{SC}$	Output short circuit current	$V_{CC} = \text{Max}$ $V_{CC} = \text{Max}$	-30	-150	mA
$I_{CC}$	Power supply current	$V_{CC} = \text{Max}$ All outputs disabled		80	mA

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## AC ELECTRICAL CHARACTERISTICS $T_A = +25^\circ\text{C}$

SYMBOL	PARAMETER	CONDITIONS	LIMITS		UNIT
			Min	Max	
$t_{PLH}$	Propagation delay input to output	$V_{CC} = 5.0\text{V}$		20	ns
$t_{PHL}$		Load = 1/		20	ns
SKEW	Output to output	$V_{CC} = 5.0\text{V}$ , Load = 1/		6.0	ns
$t_{LZ}$	Propagation delay enable to output	$V_{CC} = 5.0\text{V}$		35	ns
$t_{HZ}$		$C_L = 10\text{pF}$		30	ns
$t_{ZL}$	Propagation delay enable to output	$V_{CC} = 5.0\text{V}$		45	ns
$t_{ZH}$		Load = 1/		40	ns

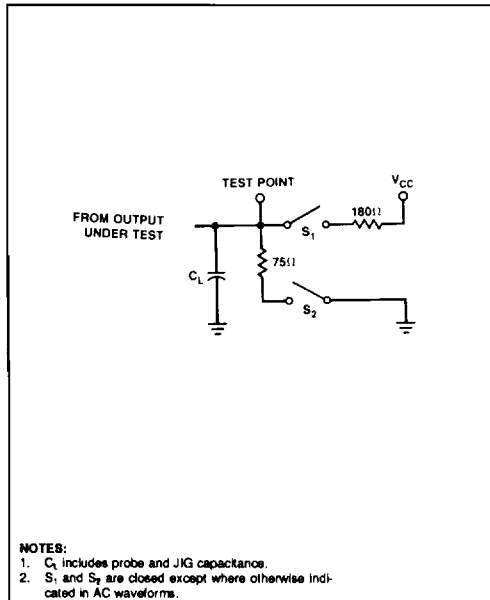
## AC ELECTRICAL CHARACTERISTICS $T_A = -55^\circ\text{C}$ and $+125^\circ\text{C}$

SYMBOL	PARAMETER	CONDITIONS	LIMITS		UNIT
			Min	Max	
$t_{PLH}$	Propagation delay input to output	$V_{CC} = 5.0\text{V}$		30	ns
$t_{PHL}$		Load = 1/		30	ns
SKEW	Output to output	$V_{CC} = 5.0\text{V}$ , Load = 1/		9.0	ns
$t_{LZ}$	Propagation delay enable to output	$V_{CC} = 5.0\text{V}$		53	ns
$t_{HZ}$		$C_L = 10\text{pF}$		45	ns
$t_{ZL}$	Propagation delay enable to output	$V_{CC} = 5.0\text{V}$		68	ns
$t_{ZH}$		Load = 1/		60	ns

**NOTE:**

1/  $C_L = 30\text{pF}$ ,  $V_{IN} = 1.3\text{V}$  to  $V_{OUT} 1.3\text{V}$ ,  $V_{PULSE} = 0\text{V}$  to  $+3.0\text{V}$ .

### EQUIVALENT AC TEST CIRCUIT



### AC WAVEFORMS

