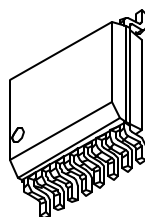
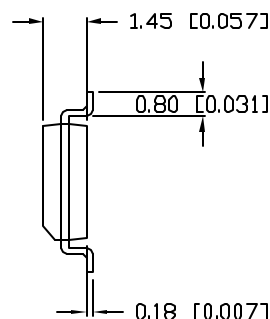
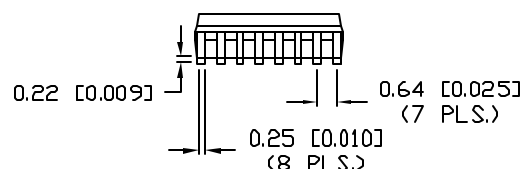
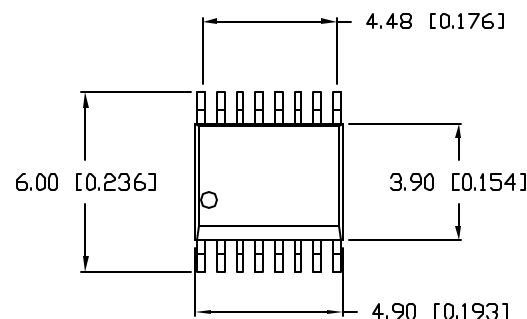
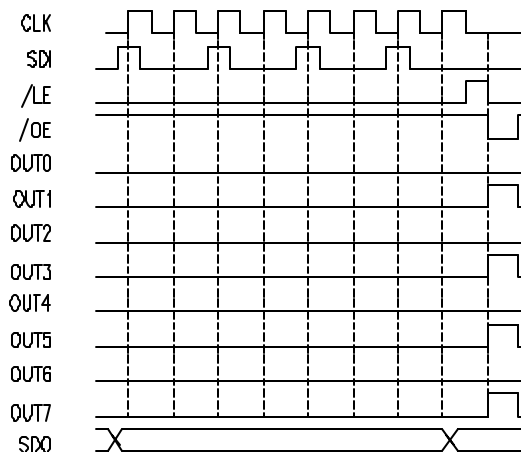


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TIMING DIAGRAM



PIN OUT PIN NO.	PIN NAME	FUNCTION
1	GND	GND TERMINAL
2	SDI	SERIAL DATA INPUT
3	CLK	CLOCK INPUT
4	/LE	LATCH INPUT
5~12	OUT 0~7	OUTPUT
13	/OE	OUTPUT ENABLE
14	SDO	SERIAL DATA OUTPUT
15	R-EXT	CONSTANT CURRENT PROG.
16	VDD	5V SUPPLY

*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), XX=±0.5 (±0.020), XXX=±0.25 (±0.010), XXXX=±0.127 (±0.005).

LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030), MIN=+0.00 (±0.000), MAX=+0.00 (±0.000).

PART NUMBER
LSD-LXS0816SSOP

REV.
A

REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #11148.	01.24.07

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

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
INPUT VOLTAGE "H"	V_{IH}		0.7 V_{DD}		V_{DD}	V
INPUT VOLTAGE "L"	V_{IL}		GND		0.3 V_{DD}	V
OUTPUT LEAKAGE	I_{OH}	$V_{OH}=17.0\text{V}$			10	μA
OUTPUT VOLTAGE	V_{OL}	$I_{OL}=+1.0\text{mA}$			0.4	V
SERIAL OUT	V_{OH}	$I_{OH}=-1.0\text{mA}$				V
OUTPUT CURRENT 1	I_{OL1}	$V_{CE}=0.8\text{V}$, $R_{EXT}=865\Omega$		40		mA
CURRENT SKEW	d_{OL1}			±1.5	±6.0	%
OUTPUT CURRENT 2	I_{OL2}	$V_{CE}=1.2\text{V}$, $R_{EXT}=330\Omega$		80		mA
CURRENT SKEW	d_{OL2}			±1.5	±6.0	%
PULL-UP RESISTOR	$R_{IN(UP)}$		150	300	600	$K\Omega$
PULL-DOWN RESISTOR	$R_{IN(DOWN)}$		85	200	400	$K\Omega$
SUPPLY CURRENT						
OUTPUTS "OFF"	$I_{DD(off)1}$	$R_{EXT}=OPEN$		0.1	1.0	mA
	$I_{DD(off)2}$	$R_{EXT}=865\Omega$	0.1	0.2	1.0	mA
	$I_{DD(off)3}$	$R_{EXT}=330\Omega$	0.1	0.2	1.0	mA
OUTPUTS "ON"	$I_{DD(on)1}$	$R_{EXT}=865\Omega$	7.0	12.0	18.0	mA
	$I_{DD(on)2}$	$R_{EXT}=330\Omega$	10.0	22.0	32.0	mA

LIMITS OF SAFE OPERATION AT 25°C

PARAMETER	MAX	UNITS
SUPPLY VOLTAGE	0~+7.0	V
OUTPUT VOLTAGE	-0.5~+17.0	V
OUTPUT CURRENT	+90	mA
INPUT VOLTAGE	-0.4~VDD+0.4	V
GND TERMINAL CURRENT	720	mA
CLOCK FREQUENCY	20	MHz
POWER DISSIPATION	+0.78	W
OPERATING TEMPERATURE	-40 TO +85	$^\circ\text{C}$
STORAGE TEMPERATURE	-55 TO +150	$^\circ\text{C}$



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PART NUMBER
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8-BIT CONSTANT CURRENT LED SINK DRIVER,
16 PIN SSOP PACKAGE.

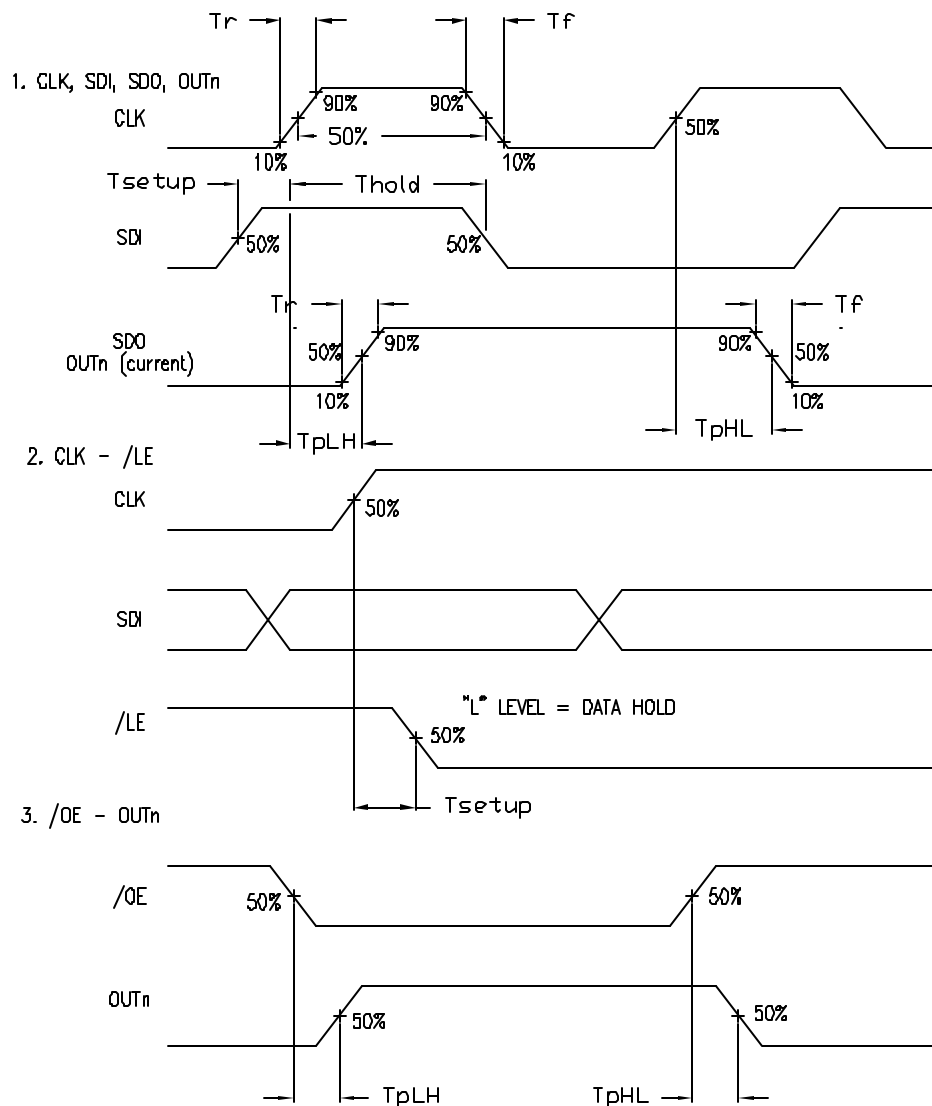
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RELIABILITY NOTE
OUR MANY YEARS OF EXPERIENCE DATA ACCUMULATION INDICATE THAT SOLDER HEAT IS A MAJOR CAUSE OF EARLY AND FUTURE FAILURE. PLEASE PAY ATTENTION TO YOUR SOLDERING PROCESS.



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LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN=+0.00 PRECISION -0.00 MAX.=+0.00 PRECISION -0.00

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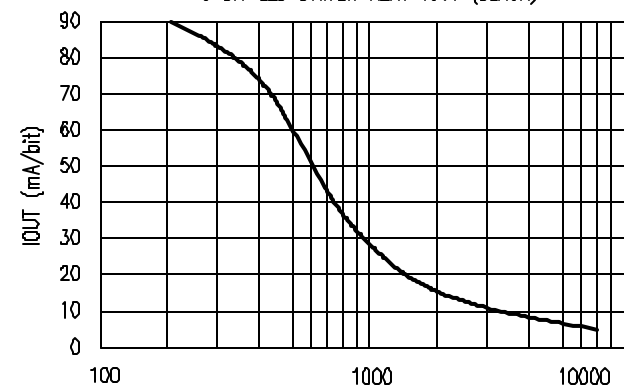
SEE PAGE 1

SWITCHING CHARACTERISTICS $T_A=25^\circ\text{C}$

PARAMETER	MIN	TYP	MAX	UNIT
PROPAGATION DELAY TIME (L ~ H)			200	nS
			300	nS
			200	nS
			300	nS
PROPAGATION DELAY TIME (H ~ L)			200	nS
			300	nS
			200	nS
			300	nS
PULSE WIDTH			15	nS
			20	nS
SET-UP TIME FOR LATCH			10	nS
			20	nS
HOLD TIME EFOR LATCH			10	nS
			25	nS
MAX CLK RISE TIME			5	nS
			5	nS
MAX CLK FALL TIME			150	nS
			200	nS
OUTPUT RISE TIME			150	nS
			200	nS
OUTPUT FALL TIME			150	nS
			200	nS

* TEST CONDITIONS: VDD=5.0V, VCE=0.8V, VIH=VDD, VIL=GND, REXT=865Ω, IOU=40mA, VL=3.4V, RL=65Ω, CL=10.5pF

8 BIT LED DRIVER REXT-IOU (BLACK)



REXT(ohm)

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