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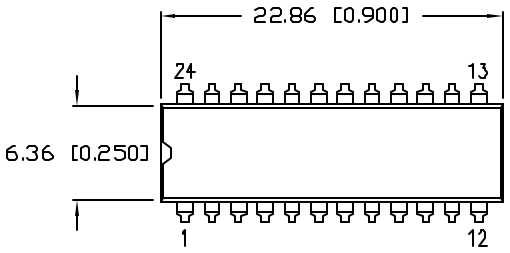
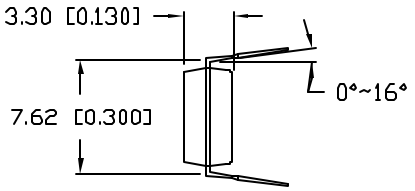
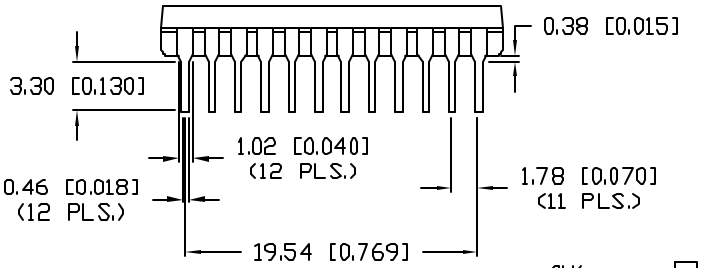
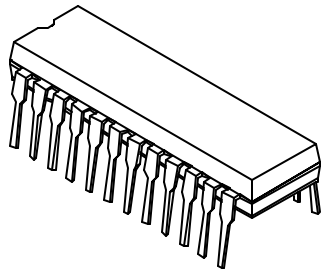
PART NUMBER	REV.
LSD-LXS1624SDIP	A

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

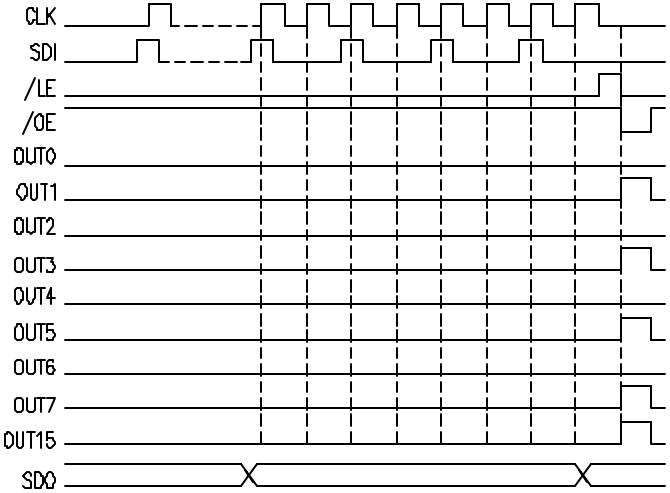








TIMING DIAGRAM



ELECTRICAL CHARACTERISTICS T_A=25°C

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
INPUT VOLTAGE "H"	V_{IH}		0.7V_{DD}		V_{DD}	V
INPUT VOLTAGE "L"	V_{IL}		GND		0.3V_{DD}	V
OUTPUT LEAKAGE	I_{OH}	V_{OH} =15.0V			10	µA
OUTPUT VOLTAGE	V_{OL}	I_{OL} =+1.0mA			0.4	V
SERIAL OUT	V_{OH}	I_{OH} =−1.0mA	4.6			V
OUTPUT CURRENT 1	I_{OL1}	V_{OE} =1.2V, REXT=3.3KΩ		40		mA
CURRENT SKEW	dI_{OL1}			±1.5	±6.0	%
OUTPUT CURRENT 2	I_{OL2}	V_{OE} =1.2V, REXT=1.4KΩ		75.5		mA
CURRENT SKEW	dI_{OL2}			±1.5	±6.0	%
PULL-UP RESISTOR	RIN(UP)		150	300	600	KΩ
PULL-DOWN RESISTOR	RIN(DOWN)		100	200	400	KΩ
SUPPLY CURRENT						
OUTPUTS "OFF"	I_{DD}(off)1	REXT=OPEN		0.6	1.2	mA
	I_{DD}(off)2	REXT=3.3KΩ	3.5	5.8	8.0	mA
	I_{DD}(off)3	REXT=1.4KΩ	6.5	10.2	15.0	mA
OUTPUTS "ON"	I_{DD}(on)1	REXT=3.3KΩ	10	16	22	mA
	I_{DD}(on)2	REXT=1.4KΩ	18	28.3	38.5	mA

PIN OUT

PIN NO.	PIN NAME	FUNCTION
1	GND	GND TERMINAL
2	SDI	SERIAL DATA INPUT
3	CLK	CLOCK INPUT
4	/LE	LATCH INPUT
5~20	OUT 0~15	OUTPUT
21	/OE	OUTPUT ENABLE
22	SDO	SERIAL DATA OUTPUT
23	R-EXT	CONSTANT CURRENT PROG.
24	VDD	5V SUPPLY

LIMITS OF SAFE OPERATION AT 25°C

PARAMETER	MAX	UNITS
SUPPLY VOLTAGE	0~+7.0	V
OUTPUT VOLTAGE	−0.5~+15.0	V
OUTPUT CURRENT	90	mA
INPUT VOLTAGE	−0.4~VDD+0.4	V
GND TERMINAL CURRENT	1440	mA
CLOCK FREQUENCY	20	MHz
POWER DISSIPATION	1.78	W
OPERATING TEMPERATURE	−40 TO +85	°C
STORAGE TEMPERATURE	−55 TO +150	°C

Pb [A]

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*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN= $^{\pm\text{DECIMAL PRECISION}}_{-0.00}$ MAX.= $^{+0.00}_{-\text{DECIMAL PRECISION}}$

REV.	PART NUMBER
A	LSD-LXS1624SDIP

16-BIT CONSTANT CURRENT LED SINK DRIVER,
24 PIN DIP PACKAGE.

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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			SCALE: N/A

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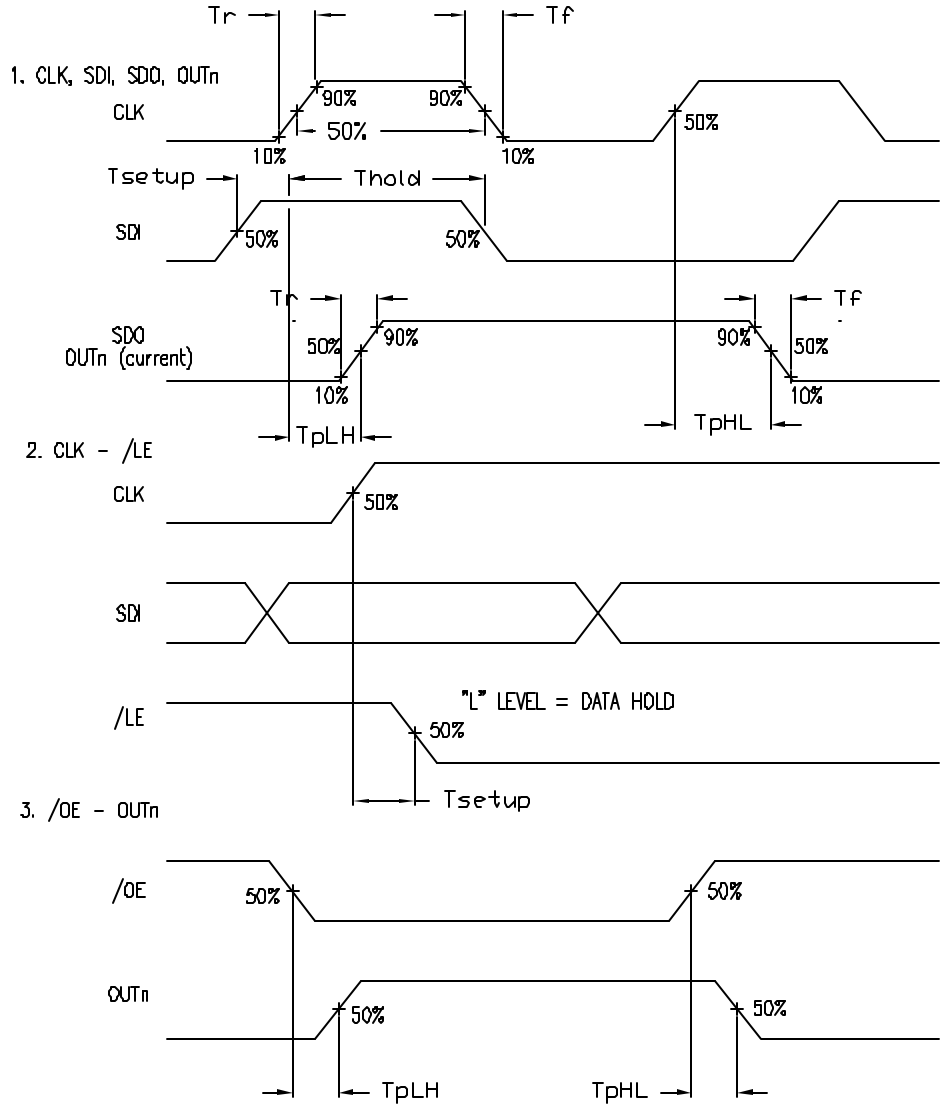
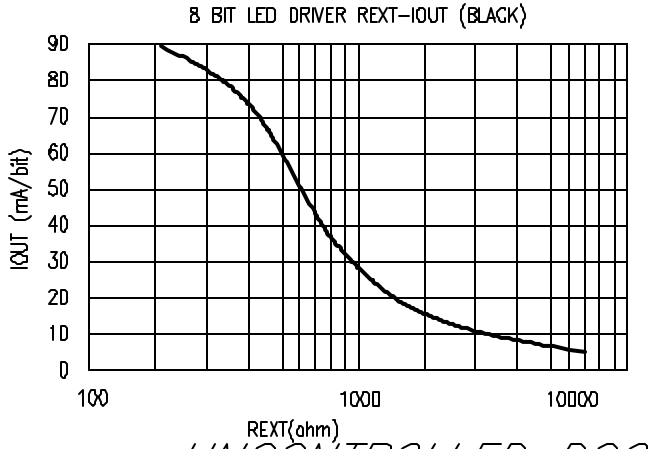


SWITCHING CHARACTERISTICS T_A=25°C

PARAMETER		MIN	TYP	MAX	UNIT
PROPAGATION DELAY TIME (L ~ H)	INn-OUTn		200	300	nS
	/LE-OUTn		200	300	nS
	/OE-OUTn		200	300	nS
	CLK-SOUT		15	30	nS
PROPAGATION DELAY TIME (H ~ L)	INn-OUTn		200	300	nS
	/LE-OUTn		200	300	nS
	/OE-OUTn		200	300	nS
	CLK-SOUT		15	30	nS
PULSE WIDTH	CLK	15		20	nS
	/LE	20		30	nS
SET-UP TIME FOR LATCH		10		20	nS
HOLD TIME EFOR LATCH		10		25	nS
MAX CLK RISE TIME				5	nS
MAX CLK FALL TIME				5	nS
OUTPUT RISE TIME			150	200	nS
OUTPUT FALL TIME			150	200	nS

* TEST CONDITIONS: VDD=5.0V, VCE=0.8V, VIH=VDD, VIL=GND, REXT=3.3KΩ, IOUT=10mA, VL=3.0V, RL=65Ω, CL=10.5pF



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