

2-Phase, High Speed CCD Driver

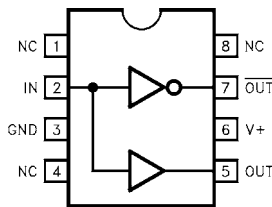


The EL7182 is extremely well suited for driving CCD's, especially where high contrast imaging is desirable. The

16V supply rating is attractive for higher voltage CCD applications, as in color fax machines. The input is TTL and 3V compatible. The low quiescent current requirement is advantageous in portable/battery powered systems. The EL7182 is available in 8-pin PDIP and 8-lead SO packages.

Pinout

**EL7182
(8-PIN PDIP, SO)
TOP VIEW**



Manufactured under U.S. Patent Nos. 5,334,883, #5,341,047

Features

- 3V and 5V Input compatible
- Clocking speeds up to 10MHz
- Reduced clock skew
- 20ns Switching/delay time
- 2A Peak drive
- Low quiescent current
- Wide operating voltage—4.5V–16V

Applications

- CCD Drivers requiring high-contrast imaging
- Differential line drivers
- Push-pull circuits

Ordering Information

PART NUMBER	TEMP. RANGE	PACKAGE	PKG. NO.
EL7182CN	-40°C to +85°C	8-Pin PDIP	MDP0031
EL7182CS	-40°C to +85°C	8-Pin SO	MDP0027

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$)

Supply (V+ to Gnd)	16.5V	Operating Junction Temperature	125°C
Input Pins	-0.3V to +0.3V above V+	Power Dissipation	
Combined Peak Output Current4A	SOIC570mW
Storage Temperature Range	-65°C to +150°C	PDIP	1050mW
Ambient Operating Temperature	-40°C to +85°C		

CAUTION: Stresses above those listed in "Absolute Maximum Ratings" may cause permanent damage to the device. This is a stress only rating and operation of the device at these or any other conditions above those indicated in the operational sections of this specification is not implied.

IMPORTANT NOTE: All parameters having Min/Max specifications are guaranteed. Typical values are for information purposes only. Unless otherwise noted, all tests are at the specified temperature and are pulsed tests, therefore: $T_J = T_C = T_A$

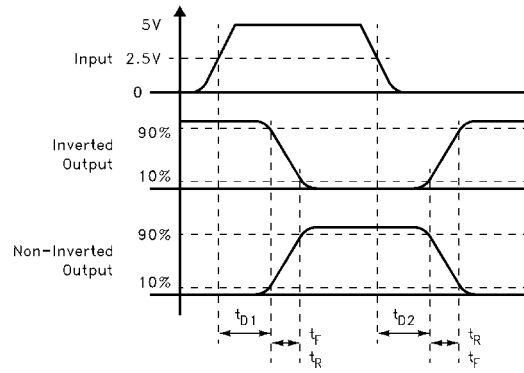
Electrical Specifications $T_A = 25^\circ\text{C}$, $V = 15\text{V}$ unless otherwise specified

PARAMETER	DESCRIPTION	TEST CONDITIONS	MIN	TYP	MAX	UNITS
INPUT						
V_{IH}	Logic "1" Input Voltage		2.4			V
I_{IH}	Logic "1" Input Current	@V+		0.1	10	μA
V_{IL}	Logic "0" Input Voltage				0.8	V
I_{IL}	Logic "0" Input Current	@0V		0.1	10	μA
V_{HVS}	Input Hysteresis			0.3		V
OUTPUT						
R_{OH}	Pull-Up Resistance	$I_{OUT} = -100\text{mA}$		3	6	Ω
R_{OL}	Pull-Down Resistance	$I_{OUT} = +100\text{mA}$		4	6	Ω
I_{PK}	Peak Output Current	Source Sink		2 2		A
I_{DC}	Continuous Output Current	Source/Sink	100			mA
POWER SUPPLY						
I_S	Power Supply Current	Input High		2.5	5	mA
V_S	Operating Voltage		4.5		16	V

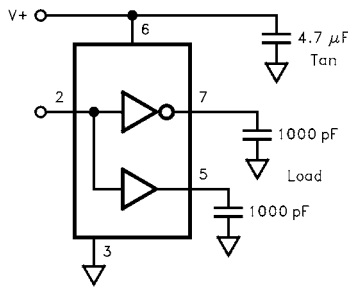
AC Electrical Specifications $T_A = 25^\circ\text{C}$, $V = 15\text{V}$ unless otherwise specified

PARAMETER	DESCRIPTION	TEST CONDITIONS	MIN	TYP	MAX	UNITS
SWITCHING CHARACTERISTICS						
t_R	Rise Time	$C_L = 500\text{pF}$ $C_L = 1000\text{pF}$		7.5 10	20	ns
t_F	Fall Time	$C_L = 500\text{pF}$ $C_L = 1000\text{pF}$		10 13	20	ns
t_{D-ON}	Turn-On Delay Time			18	25	ns
t_{D-OFF}	Turn-Off Delay Time			20	25	ns

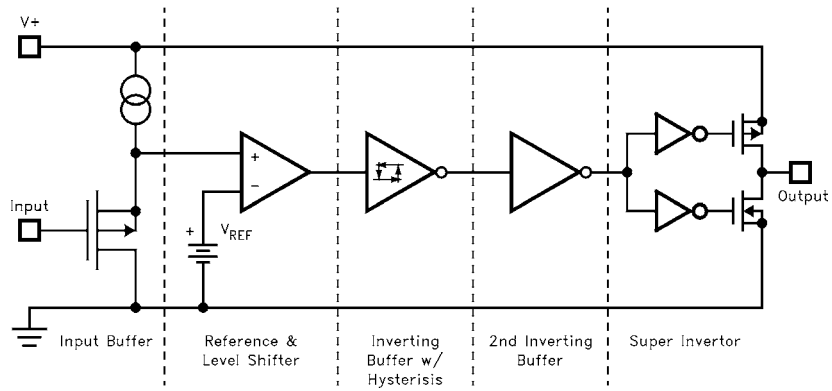
Timing Table



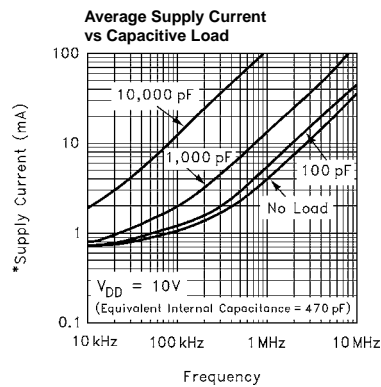
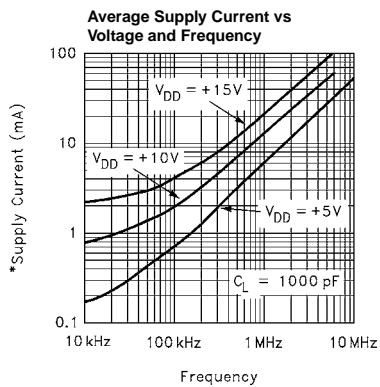
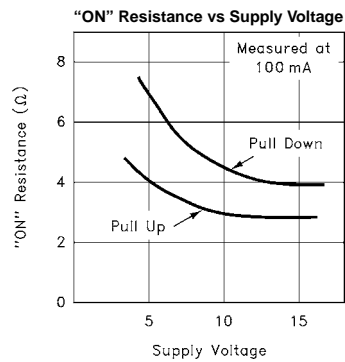
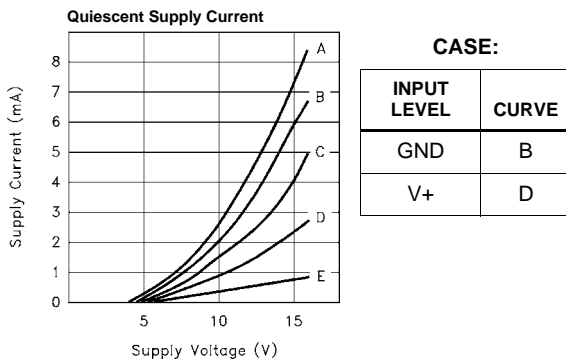
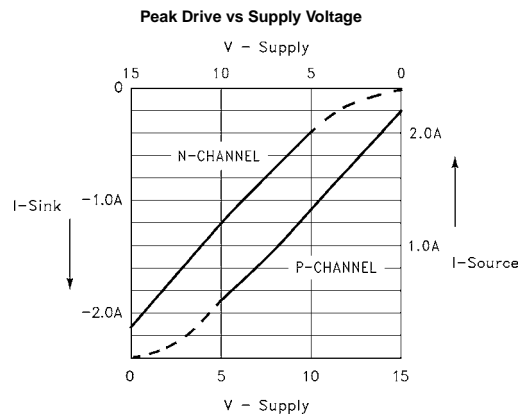
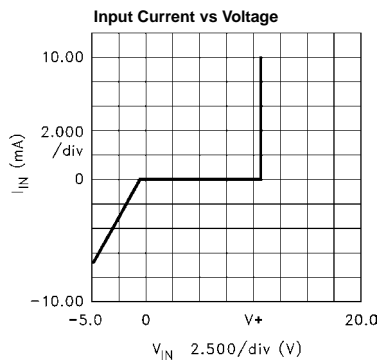
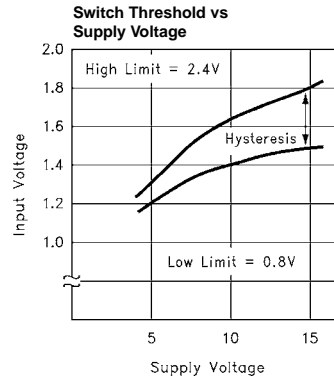
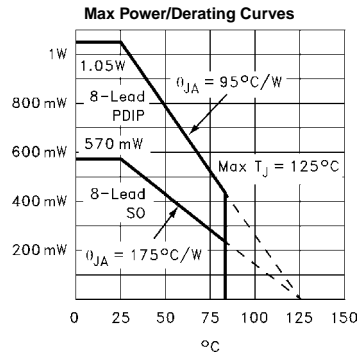
Standard Test Configuration



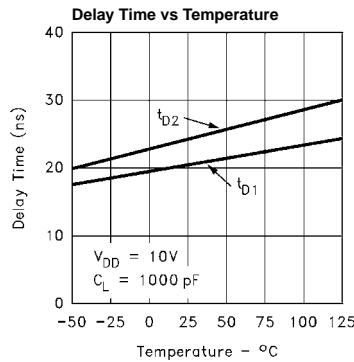
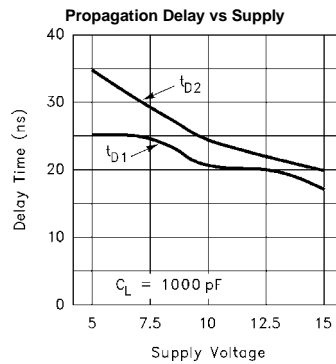
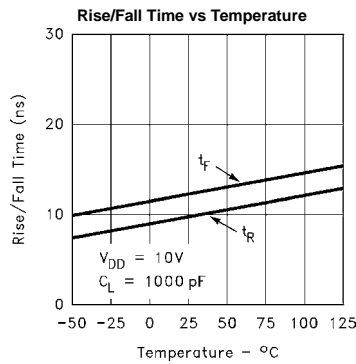
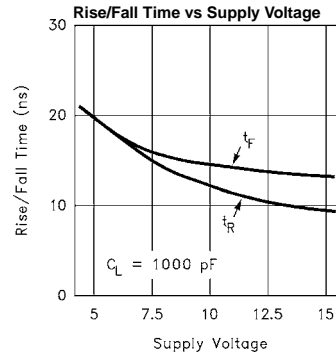
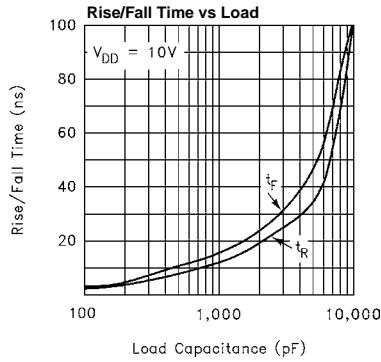
Simplified Schematic



Typical Performance Curves



Typical Performance Curves (Continued)



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