

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

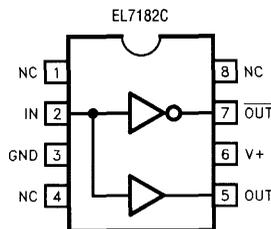
Ordering Information

| Part No. | Package | Tape & Reel | Outline # |
|--------------|---------|-------------|-----------|
| EL7182CN | PDIP-8 | - | MDP0031 |
| EL7182CS | SO-8 | - | MDP0027 |
| EL7182CS-T7 | SO-8 | 7 in | MDP0027 |
| EL7182CS-T13 | SO-8 | 13 in | MDP0027 |

General Description

The EL7182C 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 EL7182C is available in 8-pin PDIP and 8-lead SO packages.

Connection Diagrams



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

EL7182C

2-Phase, High Speed CCD Driver

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 Current | 4A | SO | 570mW |
| Storage Temperature Range | -65°C to +150°C | PDIP | 1050mW |
| Ambient Operating Temperature | -40°C to +85°C | | |

Important Note:

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

DC Electrical Characteristics

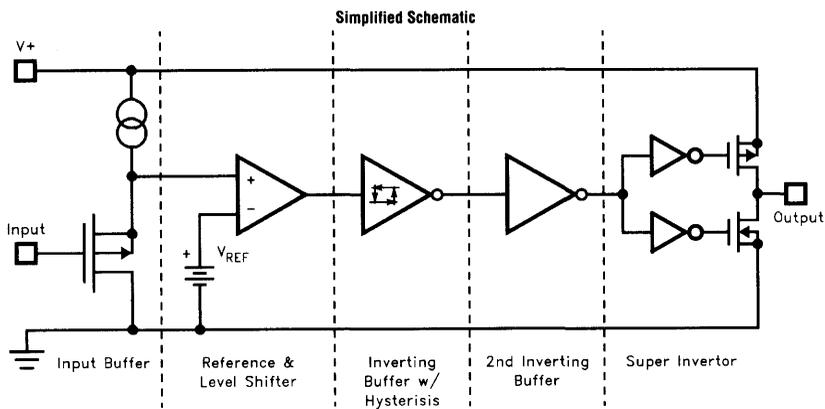
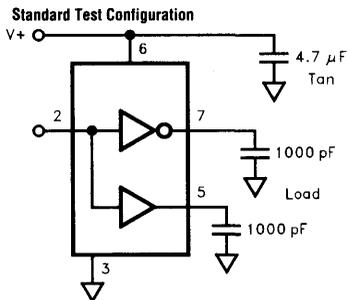
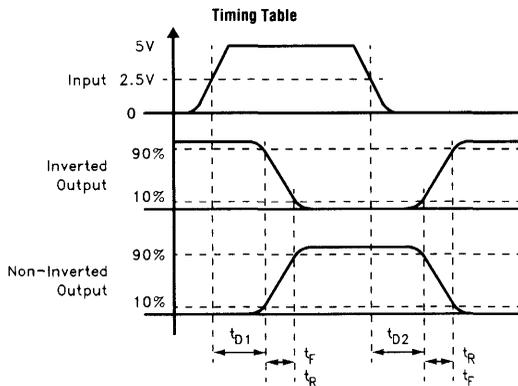
$T_A = 25^\circ\text{C}$, $V = 15\text{V}$ unless otherwise specified

| 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 Characteristics

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

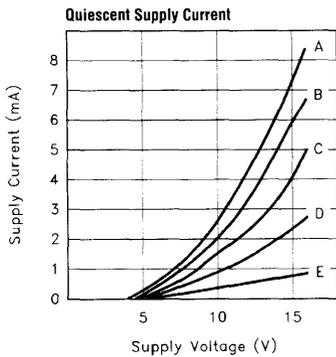
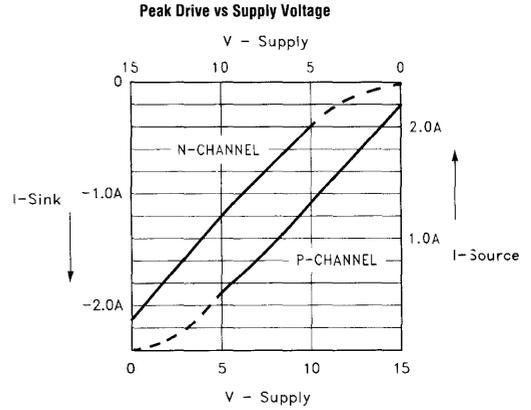
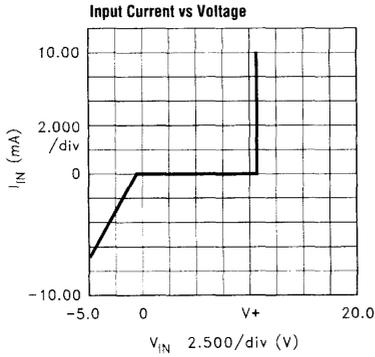
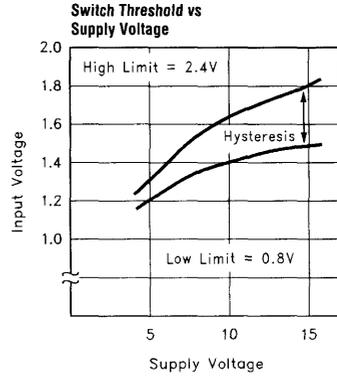
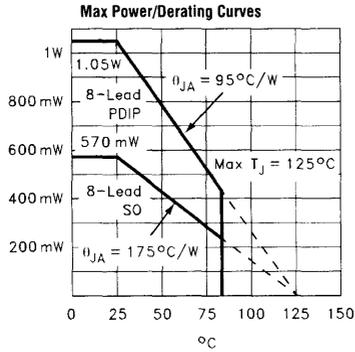
| Parameter | Description | Test Conditions | Min | Typ | Max | Units |
|---------------------------|-------------|---------------------|---|-----------|-----|-------|
| Switching Characteristics | t_R | Rise Time | $C_L = 500\text{pF}$ $C_L = 1000\text{pF}$ | 7.5 10 | 20 | ns |
| | t_F | Fall Time | $C_L = 500\text{pF}$ $C_L = 1000\text{pF}$ | 10 13 | 20 | ns |
| | t_{D-ON} | Turn-On Delay Time | | 18 | 25 | ns |
| | t_{D-OFF} | Turn-Off Delay Time | | 20 | 25 | ns |



EL7182C

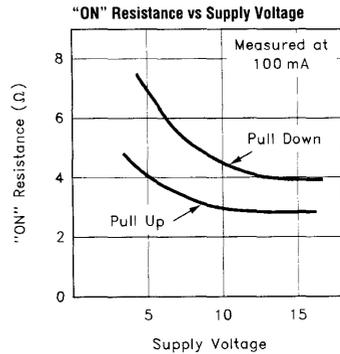
2-Phase, High Speed CCD Driver

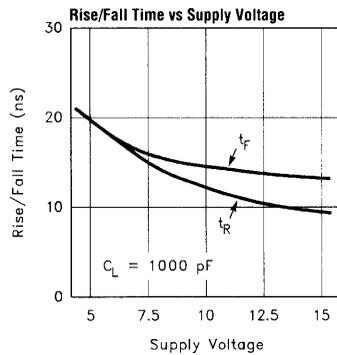
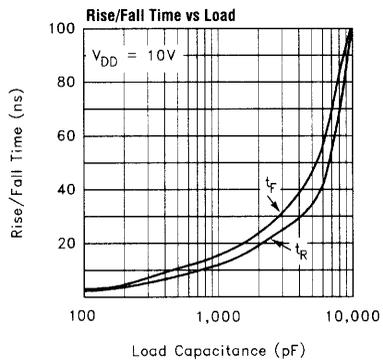
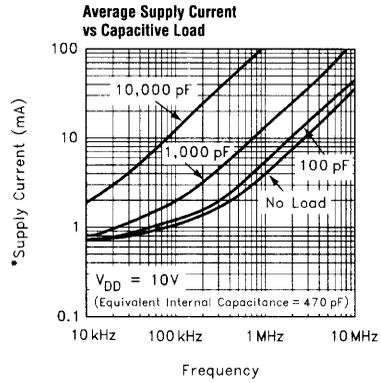
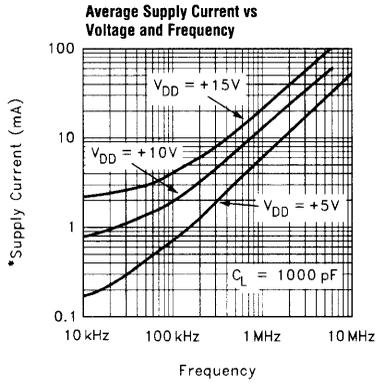
Typical Performance Curves



CASE:

| Input Level | Curve |
|-------------|-------|
| GND | B |
| V+ | D |





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