

# ZXSC400EV2 USER GUIDE

## DESCRIPTION

The ZXSC400 is voltage mode boost converter in SOT23-6 package. Its low feedback voltage allows the current in a chain of LEDs to be set and accurately monitored with a single resistor with minimal losses.

The ZXSC400EV2 is configured for 25W LED Driver applications using the ZXSC400 boost converter.

## FEATURES

- Drives strings of 23 serially connected R, G & B LEDs at 350mA
- Typical efficiency of 85%
- Over-voltage Protection

## APPLICATIONS

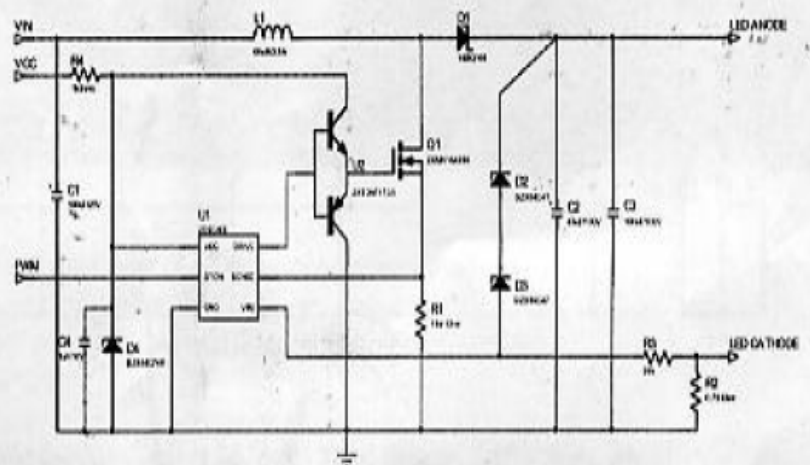
- LCD TV RGB Backlight
- High Power LED driving

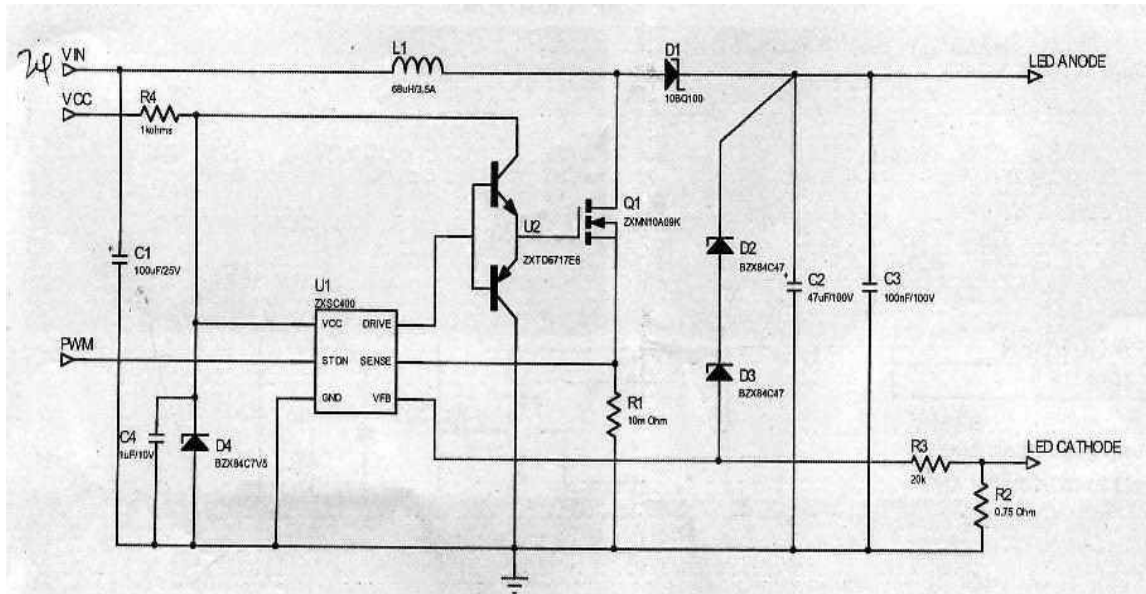
## ORDERING INFORMATION

|                     |
|---------------------|
| <b>ORDER NUMBER</b> |
| ZXSC400EV2          |

Please note evaluation boards are subject to availability and qualified leads.

## TYPICAL APPLICATION CIRCUIT





### Materials List

| Ref | Value      | Package | Part Number | Manufacturer | Notes                                    |
|-----|------------|---------|-------------|--------------|--|
| U1  | N/A        | SOT23-6 | ZXSC400E6   | Zetex        | Boost converter                          |
| U2  | N/A        | SOT23-6 | ZXTD6717E6  | Zetex        | MOSFET gate driver                       |
| Q1  | N/A        | DPAK    | ZXMN10A09K  | Zetex        | N-Channel MOSFET 100V                    |
| D1  | 100V/1A    | SMB     | 10BQ100     | IR           | 100V/1A Schottky diode                   |
| D2  | 47V        | SOT23   | BZX84C47    | Philips      | 47V Zener diode                          |
| D3  | 47V        | SOT23   | BZX84C47    | Philips      | 47V Zener diode                          |
| D4  | 7V5        | SOT23   | BZX84C7V5   | Philips      | 7V5 Zener diode                          |
| L1  | 68uH/3.5A  | N/A     | DO5022P-683 | Coilcraft    | 68uH/3.5A SMT Inductor                   |
| R1  | 10mΩ       | 1206    |             | Generic      | 1206 5% tolerance                        |
| R2  | 0.75Ω      | 1206    |             | Generic      | 1205 1% tolerance                        |
| R3  | 20kΩ       | 0805    |             | Generic      | 0805 5% tolerance                        |
| R4  | 1kΩ        | 0805    |             | Generic      | 0805 5% tolerance                        |
| C1  | 100μF/25V  | E       | EEVFK1E101P | Panasonic    | SMT Electrolytic capacitor               |
| C2  | 47μF/100V  | H13     | EEVFK2A470Q | Panasonic    | SMT Electrolytic capacitor               |
| C3  | 100nF/100V | 1206    |             | Generic      | 100nF/100V/1206/Y5V<br>Ceramic capacitor |
| C4  | 1μF/10V    | 0805    |             | Generic      | 1μF/10V/0805/Y5V Ceramic<br>capacitor    |