



HX8001

402/420CH 6-bit TFT Source Driver

September 2001, Version 02

1. General Description

The HX8001 is a 402/420 channels output selectable source driver used for driving the source line of TFT LCD panel. The HX8001 receives 6-bit by 6 dots of digital display data per clock from external and generates corresponding 64-level gray scale voltage output, which can realize a 256K colors display simultaneously. Since the output circuit of this source driver incorporates an operational amplifier, a positive and a negative voltage can be alternately output from each channel. Therefore, a high quality display with less cross-talk can be achieved.

2. Features

- 402/420 output selectable source driver for TFT LCD panel
- Maximum $13.3V_{P-P}$ output dynamic range
- Input of 6-bit by 6 dots per clock
- Capable of output 64 gray scales by means of 10 external γ reference voltages
- Applicable for dot inversion, column inversion, and n-lines inversion driving method
- Incorporate input data inversion function to reduce power dissipation
- Incorporate operational amplifier in the output circuit of each channel
- Prechargeless output buffer
- Polarity inversion output to each channel
- Right or left shift data input selectable
- 70MHz maximum operation frequency
- $3.3V \pm 0.3V$ logic supply voltage
- 8.0V to 13.5V LCD driver supply voltage