ISL24833

18-Channel Programmable I^2C TFT-LCD Reference Voltage Generator with Integrated V_{COM} Calibrator and 2 Banks of EEPROM

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The ISL24833 is an 18-channel, 10-bit I^2C programmable reference voltage generator for TFT-LCDs with dual bank outputs. It also provides an I^2C programmable, 1-channel, 8-bit V_{COM} calibrator with a V_{COM} amplifier and internal EEPROM.

The two output banks are capable of switching quickly (<1µs) enabling rapid switching between two gamma curves (or operational modes) in TFT-LCD applications. The ISL24833 also integrates two banks of EEPROM that can store all reference voltage data. The EEPROM is capable of >300 write cycles.

Combining gamma and V_{COM} reference voltage generators with low power operation and EEPROM, the ISL24833 provides a complete reference voltage solution ideal for large area TFT-LCD display applications.

The ISL24833 is available in a 32 Ld 5mmx6mm QFN thermally enhanced package. It is specified for operation across the -40°C to +85°C temperature range.

Related Literature

- For a full list of related documents, visit our website
  - ISL24833 product page

Features

- 18-channel I^2C programmable 10-bit DACs
- Integrated I^2C programmable 8-bit V_{COM} calibrator
- One V_{COM} op amp
- Two banks of EEPROM storage (rewritable >300 times)
- Fast output bank switching: <1µs typical
- Analog supply: 12V to 18V at 15mA (unloaded)
- Digital supply: 2.5V to 3.3V at 1.3mA (unloaded)
- I^2C serial interface
- Pb-free (RoHS compliant)

Applications

- TFT-LCD column driver reference generator
- TFT-LCD V_{COM} calibrator and driver
- General-purpose reference voltage generators

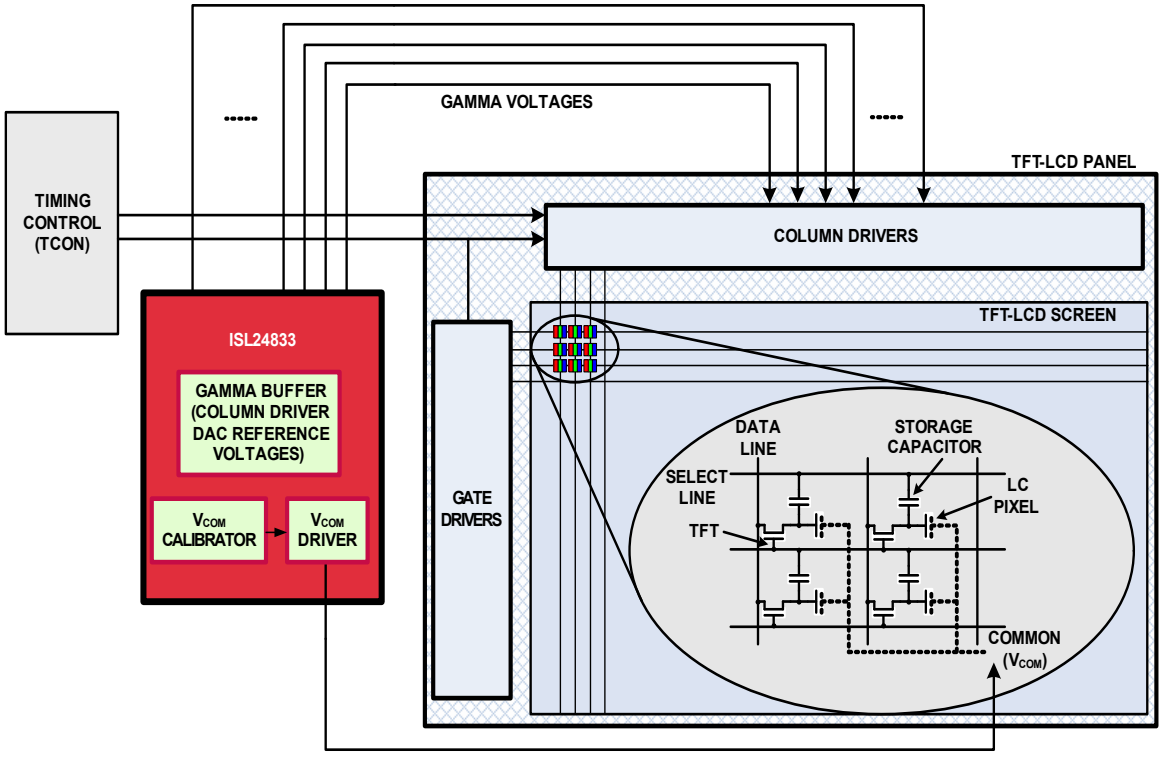

FIGURE 1. TYPICAL APPLICATION: TFT-LCD REFERENCE VOLTAGE GENERATOR