

ISL24833

18-Channel Programmable I²C TFT-LCD Reference Voltage Generator with Integrated V_{COM} Calibrator and 2 Banks of EEPROM

FN6840
Rev 4.00
Nov 29, 2017

The [ISL24833](#) is an 18-channel, 10-bit I²C programmable reference voltage generator for TFT-LCDs with dual bank outputs. It also provides an I²C 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 I²C programmable 10-bit DACs
- Integrated I²C 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)
- I²C 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

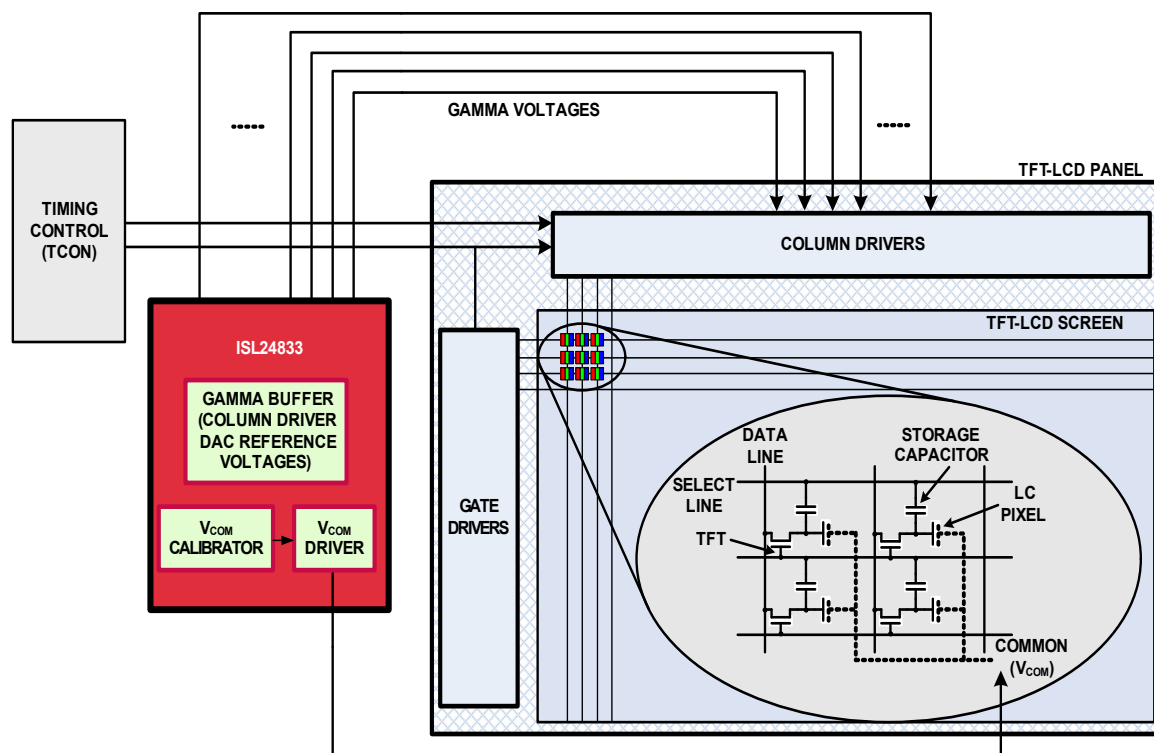


FIGURE 1. TYPICAL APPLICATION: TFT-LCD REFERENCE VOLTAGE GENERATOR

© Copyright Intersil Americas LLC 2010-2017. All Rights Reserved.
All trademarks and registered trademarks are the property of their respective owners.

For additional products, see www.intersil.com/en/products.html

Intersil products are manufactured, assembled and tested utilizing ISO9001 quality systems as noted
in the quality certifications found at www.intersil.com/en/support/qualandreliability.html

Intersil products are sold by description only. Intersil may modify the circuit design and/or specifications of products at any time without notice, provided that such modification does not, in Intersil's sole judgment, affect the form, fit or function of the product. Accordingly, the reader is cautioned to verify that datasheets are current before placing orders. Information furnished by Intersil is believed to be accurate and reliable. However, no responsibility is assumed by Intersil or its subsidiaries for its use; nor for any infringements of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Intersil or its subsidiaries.

For information regarding Intersil Corporation and its products, see www.intersil.com