

ISL24858

15-Channel I²C Programmable TFT-LCD Reference Voltage Generator with Integrated EEPROM, and Ultra-Low Power Operation

FN8295
Rev 2.00
August 2, 2012

The ISL24858 is a programmable reference voltage generator for TFT-LCDs featuring ultra-low power operation. The ISL24858 contains an I²C programmable, 10-bit, 14-channel gamma reference voltage generator with buffered outputs, a 10-bit programmable V_{COM} calibrator, a high output current V_{COM} amplifier, and internal EEPROM to store all reference voltage data. The EEPROM features an endurance of 10,000 write cycles.

Combining gamma and V_{COM} reference voltage generators with low power operation and EEPROM, the ISL24858 provides a complete reference voltage solution ideal for tablet, monitor, and mobile TFT-LCD applications.

The ISL24858 is available in a super thin 28 Ld 4x5mm X2QFN thermally enhanced package. It is specified for operation over the -40 °C to +105 °C ambient temperature range.

Features

- 15-Channel Reference Voltage Outputs, I²C Programmable:
 - 14-Channel Gamma References, 10-bit Resolution with Buffered Outputs
 - 1-Channel V_{COM} Calibrator with 10-bit Resolution
- High Output Current V_{COM} Amplifier
- Ultra-low Power Operation, Ideal for Tablet and Mobile Applications: Typical Quiescent Power, 12mW @ 8V A_{VDD}
- EEPROM Endurance: 10,000 Write Cycles
 - Read/Write Capable Over 2.25V to 3.6V D_{VDD} Range
- 6.3V to 19V Analog Supply Operating Range
- 2.25V to 3.6V Digital Supply Operating Range
- 28 Ld 4x5mm Super Thin X2QFN Package
- Pb-free (RoHS Compliant)

Applications

- Tablet, Notebook, Monitor TFT-LCD
- Mobile - 2D/3D TFT-LCD
- General-Purpose Reference Voltage Generator

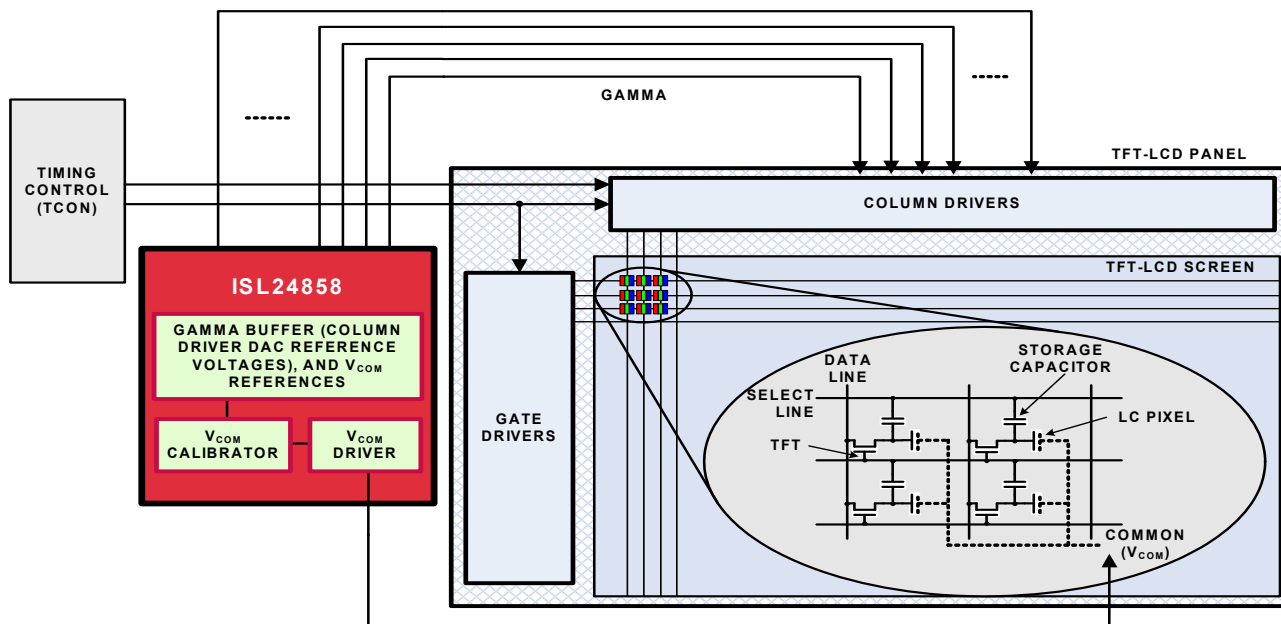


FIGURE 1. TYPICAL APPLICATION: TFT-LCD REFERENCE VOLTAGE GENERATOR

© Copyright Intersil Americas LLC 2012. 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