

14-Channel Programmable Switchable I²C TFT-LCD Reference Voltage Generator with Integrated 4-Channel Static Gamma Drivers

The ISL24006 is a 14-channel programmable switchable reference voltage generator with four channels of static gamma drivers integrated, for a complete 18-channel total gamma solution for TFT-LCD displays. The 14-channel programmable switchable configuration allows switching between two gamma curves.

The ISL24006 is divided into two banks of seven generators: one designed to cover the range from V_{REFL_L} to V_{REFL_H}; the remaining seven channels covering the range from V_{REFU_L} to V_{REFU_H}. Each bank has its own separate high and low reference inputs, with integrated buffers (four static gamma drivers) to drive the column driver internal DAC resistor string to within 0.2V from the top and bottom rails. An output MUX is used to switch between the two curves in less than 1μs. Switching is controlled using an external select pin.

ISL24006 includes an I²C interface for programming the offset values.

ISL24006 is available in the 38-pin QFN package and is specified for operation over the -40°C to +85°C temperature range.

Ordering Information

PART NUMBER	PART MARKING	TAPE & REEL	PACKAGE	PKG. DWG. #
ISL24006IRZ (See Note)	ISL24006IRZ	-	38-Pin QFN (Pb-Free)	MDP0046
ISL24006IRZ-T7 (See Note)	ISL24006IRZ	7"	38-Pin QFN (Pb-Free)	MDP0046
ISL24006IRZ-T13 (See Note)	ISL24006IRZ	13"	38-Pin QFN (Pb-Free)	MDP0046

NOTE: Intersil Pb-free plus anneal products employ special Pb-free material sets; molding compounds/die attach materials and 100% matte tin plate termination finish, which are RoHS compliant and compatible with both SnPb and Pb-free soldering operations. Intersil Pb-free products are MSL classified at Pb-free peak reflow temperatures that meet or exceed the Pb-free requirements of IPC/JEDEC J STD-020.

Features

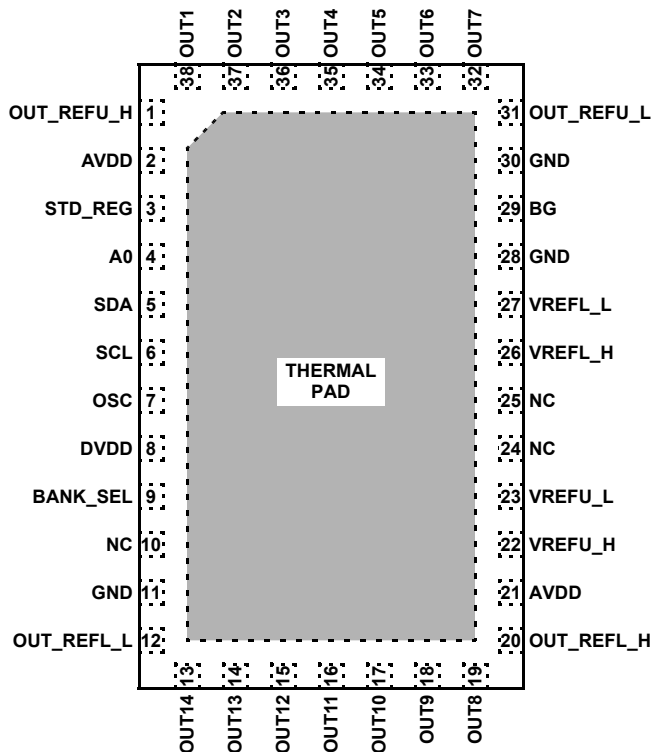
- 14-channel programmable switchable
- 4-channel static
- Fast switch time (< 1μs)
- Programmable with 20mV resolution
- Digital supply 3.3V to 5V
- Supply current of 32mA (without load)
- Rail-to-Rail capability
- I²C interface
- Pb-free plus anneal available (RoHS compliant)

Applications

- TFT-LCD drive circuits
- Reference voltage generators

Pinout

ISL24006
(38-PIN QFN)
TOP VIEW



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