

## Programmable 12+1+1 Channel Voltage Buffers with NVM for TFT LCD

### Features

- Supply Operation Range : 9V to 20V
- 12+1+1 Channels :
  - 12 Channel Rail-to-Rail Programmable Gamma Buffers
    - ◆ 10 bits Resolution for each Channel
    - ◆ 25mA Output Current for each Channel
  - 1 Channel Rail-to-Rail Vcom Buffer:
    - ◆ 10 Bits Adjustable Output
    - ◆ ±100mA Output Current
    - ◆ ±300mA Output Short-Circuit Current
    - ◆ 50V/μs Slew Rate
    - ◆ Programmable VCOM Limits
  - 1 Channel Rail-to-Rail Repair OP:
    - ◆ ±30mA Output Current
    - ◆ ±100mA Output Short-Circuit Current
    - ◆ 15V/μs Slew Rate
  - 2 Banks Registers Using BKSEL to Select which Bank Data Output
- 2-Wire I<sup>2</sup>C Slave Mode Interface

- Non-Volatile Memory (NVM) Store Setting (at Least 100 Re-Write Times)
- QFN4X4-24 Package

### Applications

- TFT-LCD Monitors
- LCD Televisions

### General Description

The G1614 consists of 12+1+1 channel buffers target toward the needs of thin film transistor liquid crystal display (TFT LCD). This device incorporates 12 gamma buffers, one Vcom buffer and one repair op which can be programmed through I<sup>2</sup>C interface. It contains two register banks which can store two different sets of gamma and VCOM values. Each buffer is capable of driving heavy capacitive loads and offering large current loading (Vcom: 100mA, Gammas: 25mA).

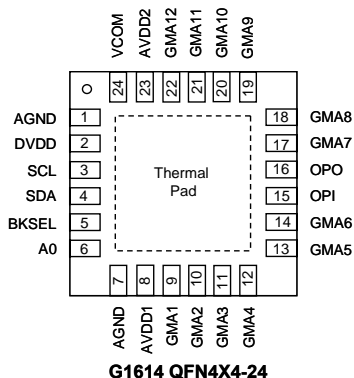
The G1614 is available in the QFN4X4-24 package.

### Ordering Information

ORDER NUMBER	MARKING	TEMP. RANGE	PACKAGE (Green)
G1614Q51U	1614	-40°C to 85°C	QFN4X4-24

Note : Q5:QFN4X4-24  
 1: Bonding Code  
 U: Tape & reel

### Pin Configuration



Note: Recommend connecting the Thermal Pad to the Ground for excellent power dissipation.

### Typical Application Circuit

