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

Features

- **Supply Operation Range : 7V to 20V**
- **12+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**
  - **---2 Banks Registers Using BKSEL to Select which Bank Data Output**
- **2-Wire I²C 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 G1603 consists of 12+1 channel buffers target toward the needs of thin film transistor liquid crystal display (TFT LCD). This device incorporates one Vcom buffer and 12 gamma buffers, and is programmed through I²C 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).

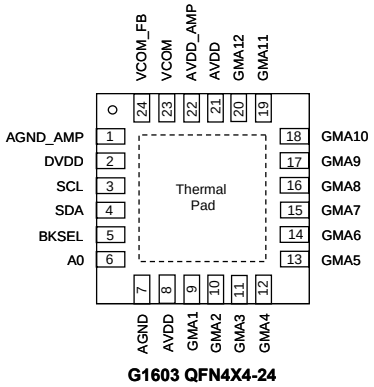
The G1603 is available in the QFN4X4-24 package.

Ordering Information

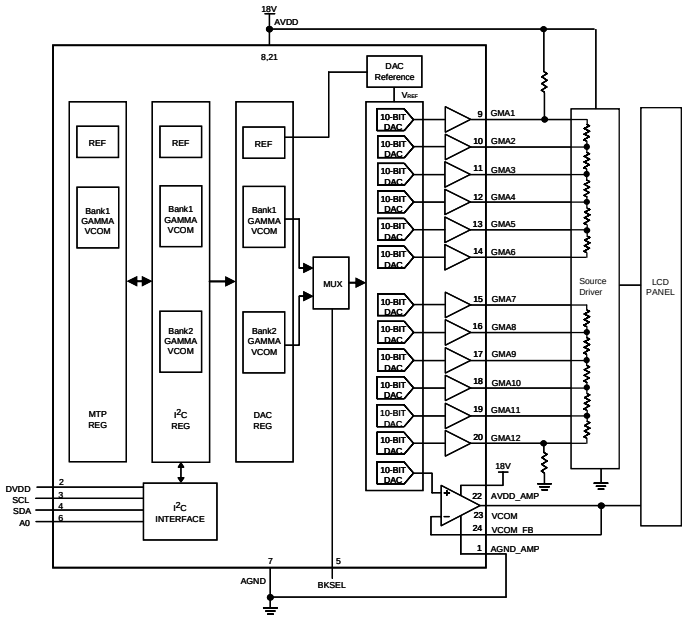
ORDER NUMBER	MARKING	TEMP. RANGE	PACKAGE (Green)
G1603Q51U	1603	-40°C to 85°C	QFN4X4-24

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

Pin Configuration



G1603 QFN4X4-24

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

Typical Application Circuit