6-CH Bias Power Supply for LCD TVs

Features

- 8V to 14V input Voltage Range
- 6-bit Boost Converter V_{AVDD}: 13.5V…19.8V
  - ♦ 750kHz Switching Frequency
  - ♦ 3-bit prog. Switch Current Limit up to 4.25A
  - ♦ 4-bit prog. HVS Offset Voltage: 0V…3V
  - ♦ bit prog. Soft-Start Time
- Integrated V_{AVDD} Isolation Switch
- 4-bit Buck Converter V_{IO}: 2.2V…3.7V
  - ♦ 750kHz Switching Frequency
  - ♦ 3A Switching Current Limit
- 5-bit Sync. Buck Converter V_{CORE}: 0.8V…3.3V
  - ♦ 2MHz Switching Frequency
  - ♦ 2.5A Switching Current Limit
- 6-bit Sync. Buck Converter V_{HAVDD}: 4.8V…11.1V
  - ♦ 750kHz Switching Frequency
  - ♦ 1.7A Switching Current Limit
- 4-bit Charge Pump Controller VGH: 20V…35V
  - ♦ 4-bit temp. Compensation Offset: 0V … 15V
- 4-bit Charge Pump Contr. VGL: -5.5V…-14.5V
- 2-bit Gate Pulse Modulation (GPM): 0V…15V
- Thermal Shutdown
- I^2C Compatible Interface
- Available in 6mmX6mm 40-pin QFN Package

Applications

- TFT LCD Displays

General Description

The G5567 DC-DC converter provides six regulated voltages required by thin-film transistor (TFT) liquid crystal displays (LCD) panels. All output voltages are programmable.

The V_{IO} and V_{CORE} buck converters are for the T-CON. The V_{AVDD} boost converter and V_{HAVDD} buck converters are for the source driver and Gamma buffer. Charge pump VGH and VGL are for the gate driver or level shifter. VGH voltage is with temperature compensation for the Gate in Panel (GIP) technology.

Also, a high voltage stress (HVS) mode for the V_{AVDD} and a V_{AVDD} isolation switch is integrated.

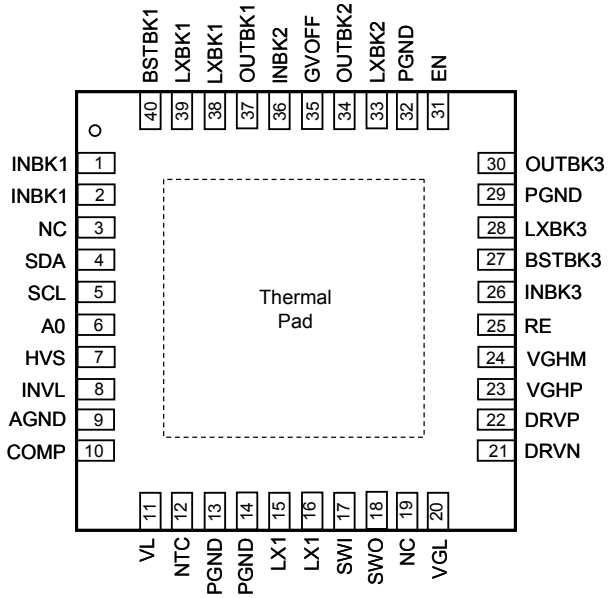
G5567 offers high current capabilities, and is ideal for large screen LCD monitors panels and TV applications with 12V supply voltage.

Ordering Information

ORDER NUMBER	MARKING	TEMP. RANGE	PACKAGE (Green)
G5567QG1U	5567	-40°C~ +85°C	QFN6X6-40

Note: QG: QFN6X6-40
1: Bonding Code
U : Tape & Reel

Pin Configuration



G5567 QFN6X6-40

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