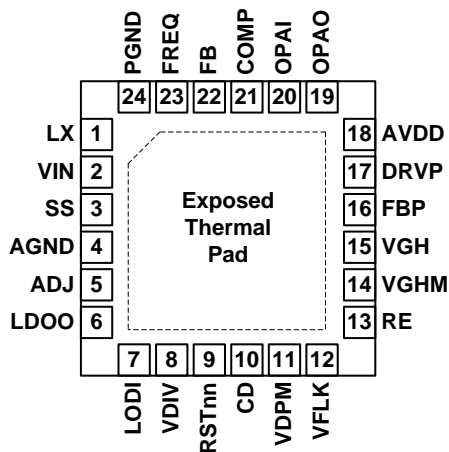


## Multi-Channel TFT LCD Supply

### FEATURES

- 2.5V to 5.5V input supply
- 640k/1.2MHz switching frequency
- Current-mode boost regulator
  - Integrated 16V/2.0A 200mΩ FET
  - Fast transient response to pulsed load
  - High efficiency up to 90%
  - Adjustable high-accuracy output voltage ( $\pm 1\%$ )
  - Adjustable soft-start
  - Over current protection
  - Output under voltage protection
- $V_{GH}$  positive charge pump controller
- Low-dropout voltage linear regulator
  - Adjustable output voltage ( $\pm 1.5\%$ )
  - 350mA maximum output current
- Unit gain  $V_{COM}$  buffer amplifier
  - 12MHz bandwidth
  - 12V/ $\mu$ s slew rate
  - 150mA output current limit
- Low-voltage detection circuit
  - Programmable detecting voltage and delay time
- GPM controller with adjustable falling time
  - Flicker compensator
  - Power-on sequence control
- Thermal shutdown
- Thin 4x4 mm 24-lead VQFN package

### QFN-24 Pin Configuration (Top View)



### APPLICATIONS

- TFT LCD for Notebooks
- TFT LCD for Monitors
- Car Navigation Display
- Portable equipment

### DESCRIPTION

The ANX6621 is an integrated power supply solution optimized for small to medium size thin-film transistor (TFT) liquid crystal displays (LCD's).

The boost converter operates at a selectable switching frequency of 640k/1.2MHz. The integrated N-channel FET has a typical current limit of 2.0A and can support output voltages up to 16V.

A positive charge pump with an integrated driver can produce up to 40V of positive gate drive.

The integrated VCOM unity-gain buffer with an adjustable output voltage can sink or source up to 150mA short-circuit current and up to 75mA continuous current.

The GPM is a flicker compensation circuit to reduce the coupling effect of gate lines; the gate-shaping timing is controlled by the timing-controller to modulate the Gate-On voltage, VGHM. It also can delay the Gate-On voltage during power-on to achieve a correct power-on sequence for gate driver ICs. Both the power-on delay time and the falling time of the Gate-On voltage are programmable by external capacitor and resistor.

To minimize the inrush current, the soft-start period can be adjusted by an external capacitor.

A built-in voltage detector generates a reset signal when the input voltage drops below a specified level. The detecting level is decided by an external resistor divider and the delay time is programmable by an external capacitor.

The ANX6621 is available in a thin 24-pin 4x4 mm VQFN green package.