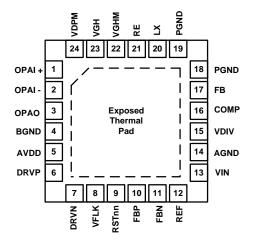


Multi-Channel TFT LCD Supply

FEATURES

- 2.5V to 5.5V input supply
- Current-mode boost regulator
 - 1.2MHz switching frequency
 - Integrated 20V/3.0A 160m Ω FET
 - Fast transient response to pulsed load
 - High efficiency up to 90%
 - Adjustable high-accuracy output voltage (±1%)
 - Over current protection
 - Over voltage protection
- VGH positive charge pump controller
- VGL negative charge pump controller
- Integrated high performance operational amplifier
 - ±200mA output short-circuit current
 - 40V/us fast slew rate
 - 20MHz Bandwidth
 - rail-to-rail output
- Low-voltage detection circuit
- GPM controller
 - Adjustable falling time
 - Adjustable delay
- 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 ANX6732 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 the frequency of 1.2MHz. The integrated N-channel FET has a typical current limit of 3.0A and can support output voltages up to 20V.

The gate-on and gate-off charge pumps provide regulated TFT-LCD gate-on and gate-off supplies. Both outputs can be adjusted by external resistive voltage-dividers.

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.

The integrated operational amplifier is typically used for LCD VCOM driving; the output can sink or source up to 200mA short-circuit current. This operational amplifier features fast slew rate (40V/us), wide bandwidth (20MHz), and rail-to-rail outputs as well.

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

The ANX6732 is available in a thin 24-pin 4x4 mm VQFN green package.