

Triple Outputs Switching Regulator for AMOLED Display

DESCRIPTION

The EUP2650 is designed to drive AMOLED displays requiring V_{ELVDD} , V_{ELVSS} and V_{AVDD} . It integrates two high performance boost converters for V_{ELVDD} and V_{AVDD} , an inverting buck-boost converter for V_{ELVSS} . A Single Wire interface on the CTRL pin is integrated to adjust the V_{ELVSS} and V_{AVDD} voltage in digital steps. Also the CTRL pin can turn the V_{ELVSS} and V_{AVDD} voltage on or off. The EN_VO3 pin turns a boost converter for V_{AVDD} on or off.

Fault protection includes cycle-by-cycle current limit, short circuit protection and thermal shutdown. Internal soft-start minimizes the inrush supply current and the output overshoot at initial startup.

The EUP2656 is available in 3mm×3mm 16 pin QFN package.

FEATURES

- 2.9V to 4.5V Input Voltage Range
- Excellent Line and Load Regulation
- 1.45MHz Switching Frequency
- High Accuracy Fixed 4.6V V_{ELVDD} Output Voltage
- Programmable V_{AVDD} = 5.8V to 7.9V (Default 7.6V)
- Programmable V_{ELVSS} = -5.4V to -1.4V (Default -4.0V)
- 300mA Maximum Output Current for V_{ELVDD} and V_{ELVSS}
- 55mA Maximum Output Current for V_{AVDD}
- Short Circuit Protection
- Thermal Shutdown
- Available in 3mmx3mm 16 pin QFN Package
- RoHS Compliant and 100% Lead(Pb)-Free Halogen-Free

APPLICATIONS

- Active Matrix OLED

Typical Application Circuit

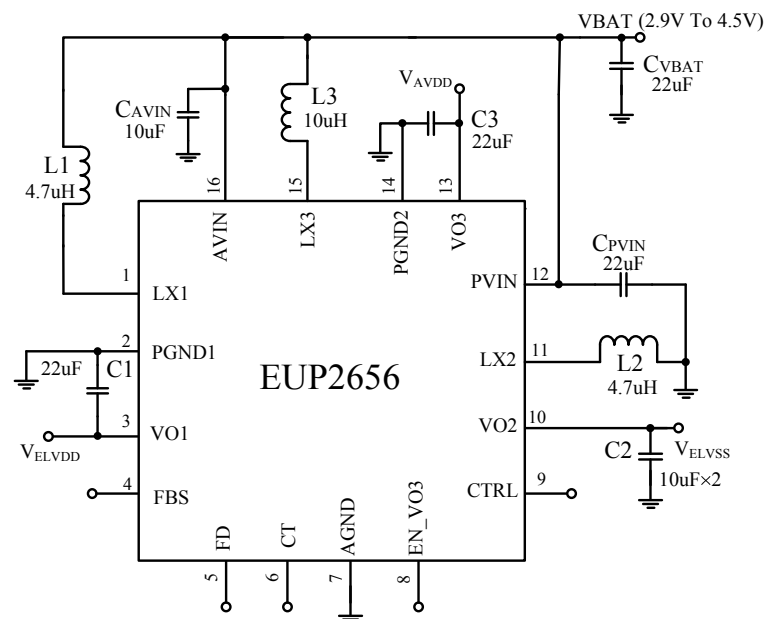


Figure 1. Application Circuit