

GW5110

Triple Output AMOLED Display Power Management IC

Description

The GW5110 is designed to drive Active Matrix Organic Light Emitting Diode (AMOLED) displays requiring VAVDD, VELVDD and VELVSS. The device integrates a boost converter for VELVDD, an inverting buck-boost converter for VELVSS and a boost converter for VAVDD, which are suitable for battery operated products.

The digital interface control pin (SWIRE) allows programming of VAVDD, VELVDD and VELVSS. The GW5110 provides excellent line and load regulation by using a novel proprietary power management technology.

Features

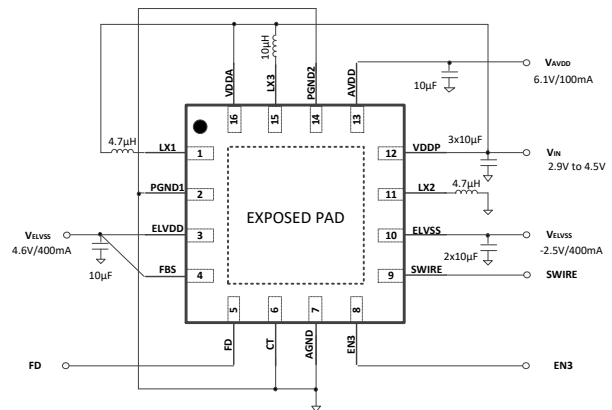
- 2.9-V to 4.5-V Input Voltage Range
- Synchronous Boost Converter (AVDD)
 - 5.8V to 7.9V Output Voltage (programmable)
 - 6.1V Default Output Voltage
 - 1% Accuracy
 - 150mA Output Current Capability
- Synchronous Boost Converter (ELVDD)
 - 4.6V to 5.0V Output Voltage (programmable)
 - 4.6V Default Output Voltage
 - 1% Accuracy
 - 400mA Output Current Capability
 - External Output Voltage Sensing Pin for Load Drop Compensation
- Synchronous Inverting Buck-Boost Converter (ELVSS)
 - -5.4V to -1.4V Output Voltage (programmable)
 - -2.5V Default Output Voltage
 - 1.5% Accuracy
 - 400mA Output Current Capability
- Single-Wire Digital Interface for Programming
- Short Circuit Protection
- Thermal Shutdown

Physical Characteristics

- Input supply voltage, V_{DDP} : 2.9V to 4.5V
- ELVDD boost converter output voltage range: 4.6V ~ 5.0V
- ELVSS inverting buck-boost converter output voltage range: -5.4V ~ -1.4V
- AVDD boost converter output voltage range: 5.8V ~ 7.9V
- Operating junction temperature: -40°C to 125°C
- Available in 3mm x 3mm x 0.75mm 16-Pin WQFN Package

Typical Applications

- Smartphones
- Small Size Tablets
- AMOLED displays up to 8"

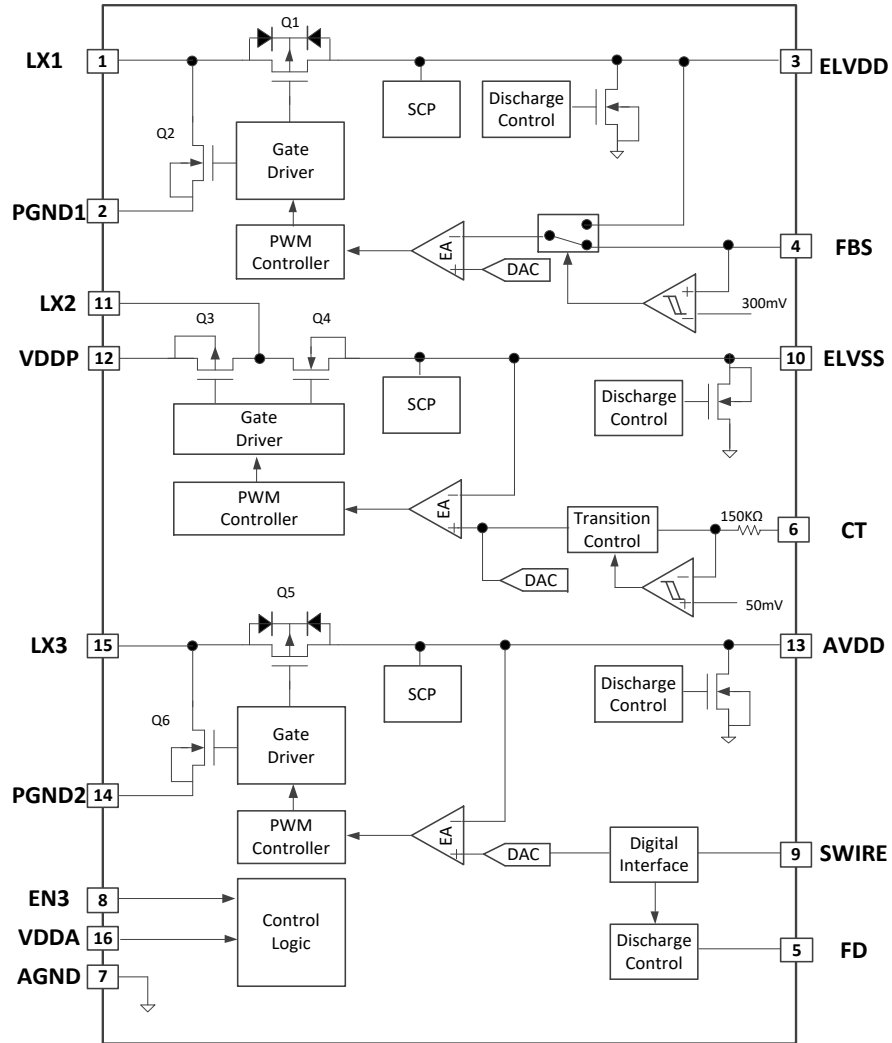


Basic Application Diagram

Ordering Information

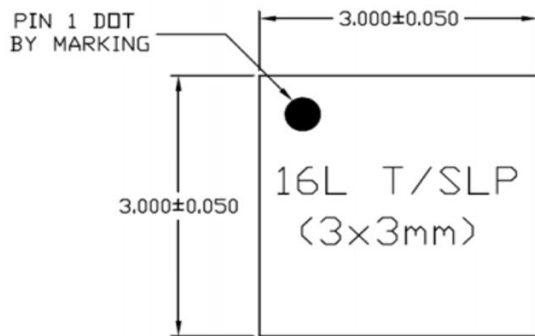
Device name	Package	Remark
GW5110_Q16	16WQFN, 0.75mm pitch 3x3 body	

Block Diagram

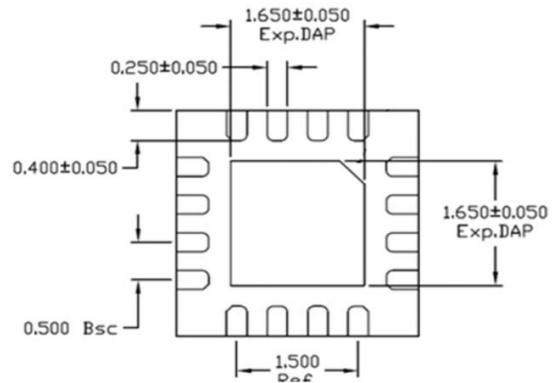


Package Information

Top View



Bottom View



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