

# GW5111

## Triple Output AMOLED Display Power Management IC

### Description

The GW5111 is designed to drive displays Active Matrix Organic Light Emitting Diode (AMOLED) requiring  $V_{(AVDD)}$ ,  $V_{(ELVDD)}$  and  $V_{(ELVSS)}$ . The device integrates a boost converter for  $V_{(ELVDD)}$ , an inverting buck-boost converter for  $V_{(ELVSS)}$  and a boost converter for  $V_{(AVDD)}$ , which are suitable for battery operated products. The digital interface control pin (SWIRE) allows programming  $V_{(AVDD)}$ ,  $V_{(ELVDD)}$  and  $V_{(ELVSS)}$  in digital steps.

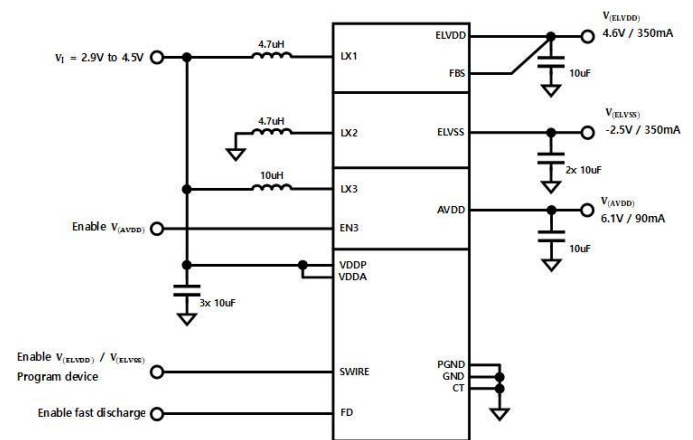
### Features

- 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
  - **90mA** Output Current Capability
  - 100-mA Output Current Protection ( $\pm 20\%$ )
  - $V_I$  to  $V_O$  and  $V_O$  to  $V_I$  Isolation
- Synchronous Boost Converter (ELVDD)
  - 4.6V to 5.0V Output Voltage (programmable)
  - 4.6V Default Output Voltage
  - 1% Accuracy
  - **350mA** Output Current Capability
  - External Output Voltage Sensing Pin for Load Drop Compensation
  - Excellent Line Transient Response
  - $V_I$  to  $V_O$  and  $V_O$  to  $V_I$  Isolation
- Synchronous Inverting Buck-Boost Converter (ELVSS)
  - -5.4V to -1.4V Output Voltage (programmable)
  - -2.5V Default Output Voltage
  - 2% Accuracy at -2.5V ( $\pm 30mV$ )
  - **350mA** Output Current Capability
  - $V_I$  to  $V_O$  and  $V_O$  to  $V_I$  Isolation
- Single-Wire Digital Interface for Programming
- Short Circuit Protection
- Thermal Shutdown
- Available in 3-mm x 3-mm x 0.75-mm 16-Pin WQFN Package

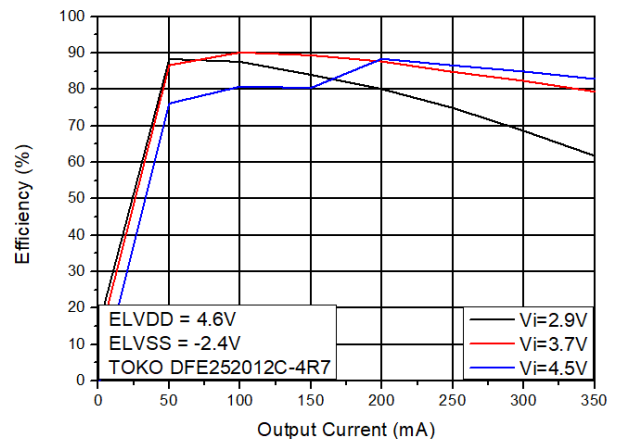
### Typical Applications

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

### Simplified Schematic



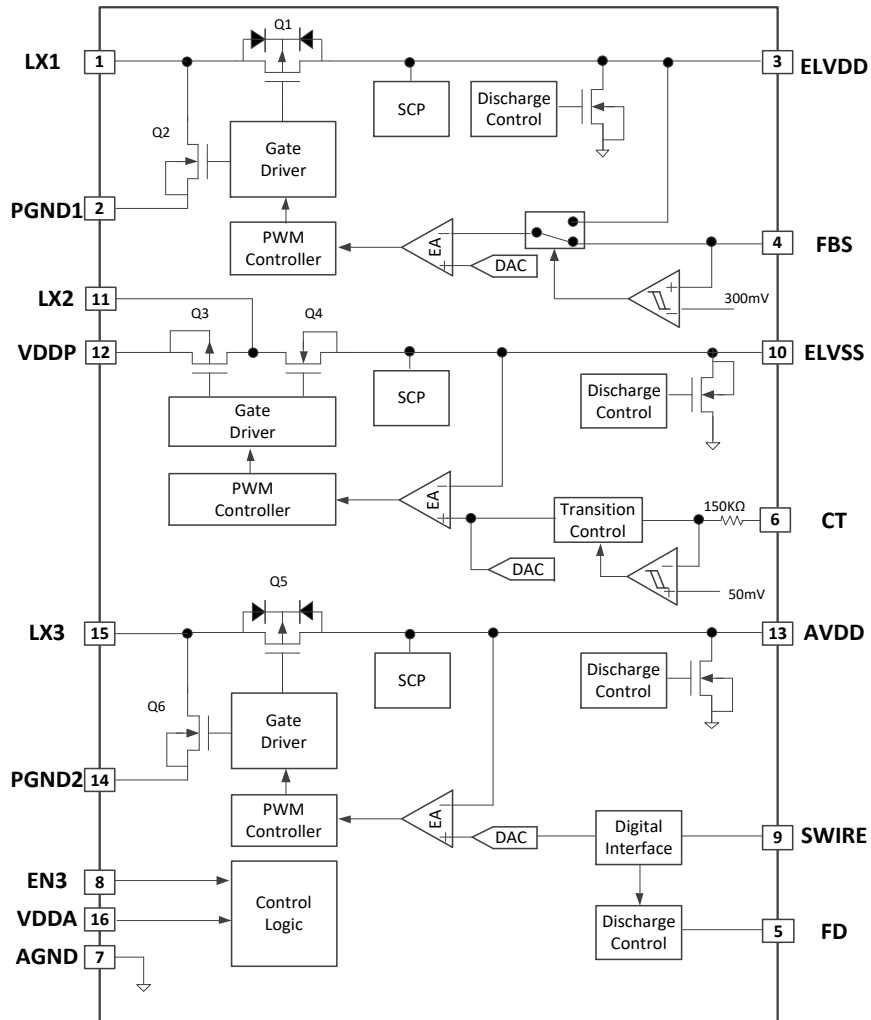
### Efficiency



### Ordering Information

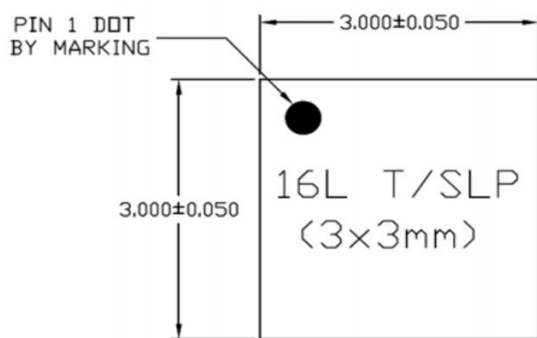
Device name	Package	BODY SIZE (NOM)
GW5111	WQFN(16)	3.00mm x 3.00 mm

## Functional Block Diagram

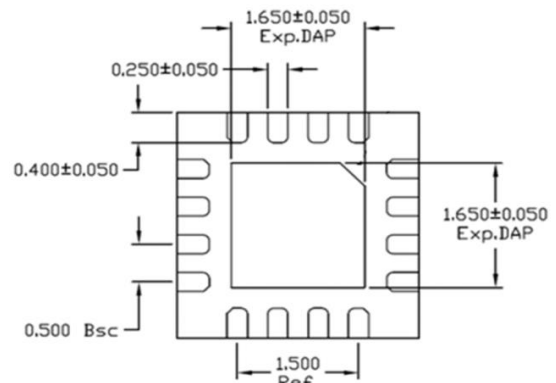


## Package Information

### Top View



### Bottom View



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