

## **ADVANCE INFORMATION**

September 2006

## LP5552

# PWI 2.0 and PowerWise™ Technology Compliant Energy Management Unit

# **General Description**

The LP5552 is a PWI 2.0 compliant Energy Management System for reducing power consumption of stand-alone mobile phone processors such as base-band or applications processors.

The LP5552 contains two advanced, digitally controlled switching regulators for supplying variable voltage to processor core and memory. The device also incorporates 5 programmable LDO regulators for powering I/O, peripheral logic blocks, maintaining memory retention (dual-domains) in shutdown mode, and auxillary functions.

The device is controlled via the PWI 2.0 open-standard interface. The LP5552 operates cooperatively with Power-Wise technology compatible processors to optimize supply voltages adaptively over process and temperature variations (adaptive voltage scaling) or dynamically using frequency/voltage pre-characterized look-up tables (dynamic voltage scaling).

## **Features**

- Two 800 mA buck regulators operate 180 degrees out of phase for reduced EMI
- 3.6 MHz PWM switching frequency
- Five programmable LDOs ideal for I/O , PLL, and memory retention supply generation.
- Supports high-efficiency PowerWise Technology Adaptive Voltage Scaling
- PWI 2.0 open standard interface for system power management
- Digitally controlled intelligent voltage scaling
- Auto or PWI controlled PFM mode transition
- Internal soft start/startup sequencing.
- Power OK output.

# **Applications**

- Dual core processors
- GSM/GPRS/EDGE & UMTS cellular handsets
- Hand-held radios
- PDAs

DataShee 4Battery powered devices

Portable instruments

# **System Diagram**

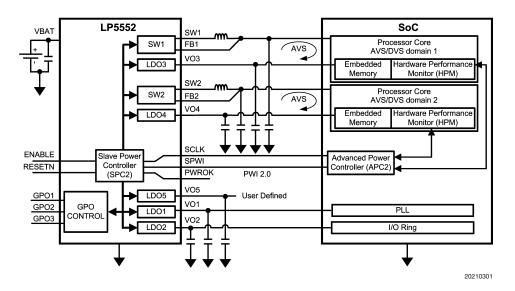


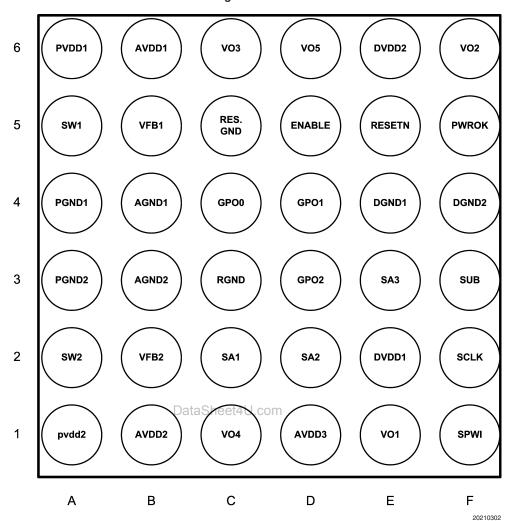
FIGURE 1. System Diagram

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# **Connection Diagrams and Package Mark Information**

36 bump uSMD package NS Package Number TLA36TTA



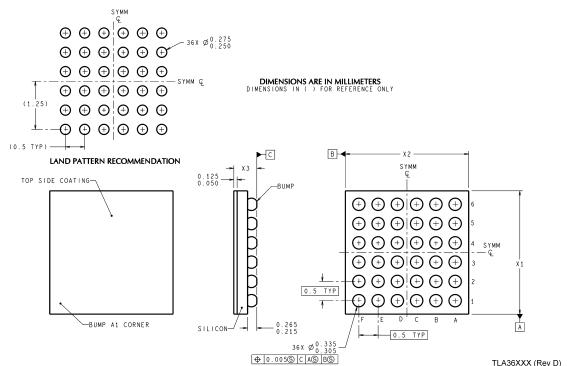
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FIGURE 2. LP5552 Pinout

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## Physical Dimensions inches (millimeters) unless otherwise noted



36-Bump uSMD Package **NS Package Number TLA36TTA** 

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English Tel: +44 (0) 870 24 0 2171

**National Semiconductor** 

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**National Semiconductor** Asia Pacific Customer Support Center Email: ap.support@nsc.com **National Semiconductor** Japan Customer Support Center Fax: 81-3-5639-7507 Email: jpn.feedback@nsc.com Tel: 81-3-5639-7560