

## 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 auxiliary functions.

The device is controlled via the PWI 2.0 open-standard interface. The LP5552 operates cooperatively with PowerWise 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).

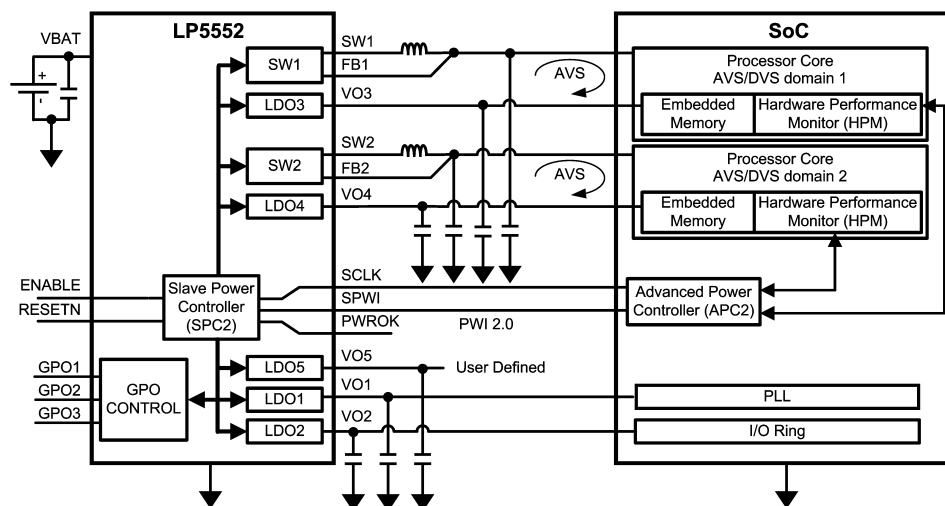
## Features

- 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
- Battery powered devices
- Portable instruments

## System Diagram

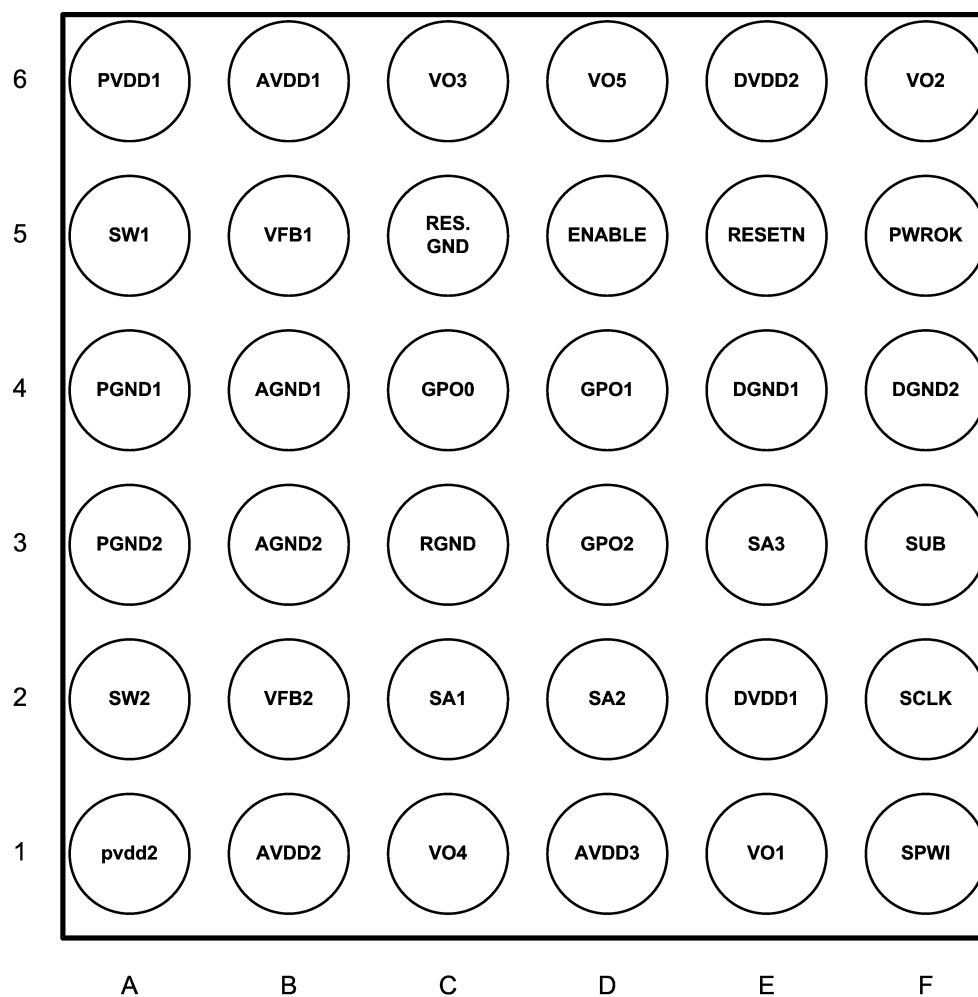


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FIGURE 1. System Diagram

## Connection Diagrams and Package Mark Information

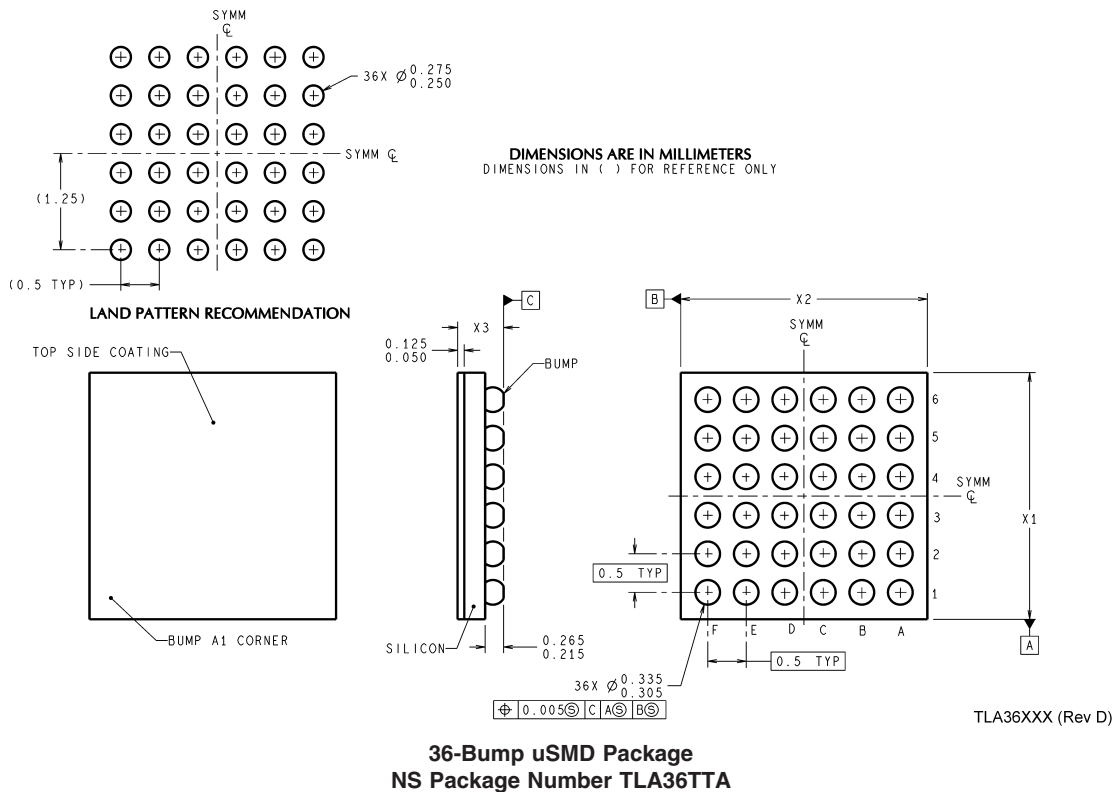
36 bump uSMD package  
NS Package Number TLA36TTA



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FIGURE 2. LP5552 Pinout

## Physical Dimensions inches (millimeters) unless otherwise noted



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