

Four-Channel Integrated Power Management IC for Handheld Portable Equipment

FEATURES

- **Four Integrated Regulators**
 - 350mA PWM Step-Down DC/DC
 - 80mA Low Noise LDO
 - 150mA Low Noise LDO
 - 300mA Low Noise LDO
- **Independent Enable/Disable Control**
- **I²C™ Compatible Serial Interface**
 - Programmable Output Voltages
 - Configurable Operating Modes
- **Minimal External Components**
- **3×3mm, Thin-QFN (TQFN33-16) Package**
 - Only 0.75mm Height
 - RoHS Compliant

APPLICATIONS

- Portable Devices and PDAs
- MP3/MP4 Players
- Wireless Handhelds
- GPS Receivers, etc.

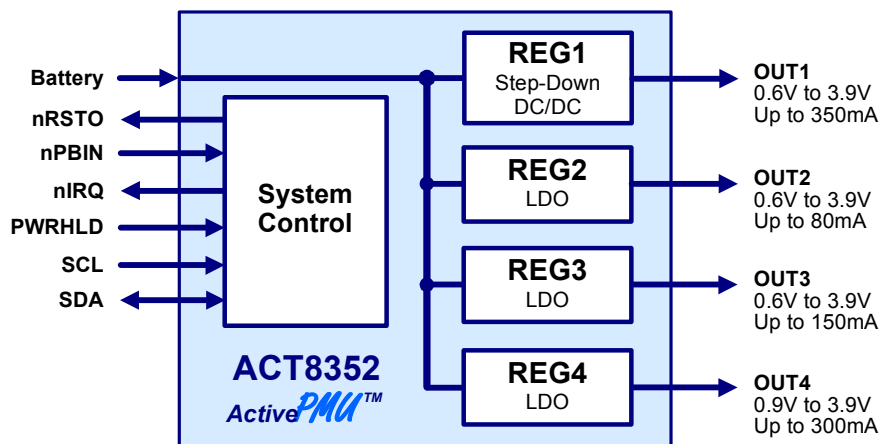
GENERAL DESCRIPTION

The patent-pending ACT8352 is a complete, cost effective, highly-efficient *ActivePMU™* power management solution that is ideal for a wide range of portable handheld equipment. This device integrates one PWM step-down DC/DC converter and two low noise, low dropout linear regulators (LDOs) in a single, thin, space-saving package. This device is ideal for a wide range of portable handheld equipment that can benefit from the advantages of *ActivePMU* technology but does not require a high level of integration.

REG1 is a fixed-frequency, current-mode PWM step-down DC/DC converter that is optimized for high efficiency and is capable of supplying up to 350mA output current. REG1's output is available in a variety of factory-preset output voltage options, and an adjustable output voltage mode is also available. REG2, REG3, and REG4 are low noise, high PSRR linear regulators that are capable of supplying up to 80mA, 150mA, and 300mA, respectively. Finally, an I²C serial interface provides programmability for the DC/DC converters and LDOs.

The ACT8352 is available in a tiny 3mm × 3mm 16-pin Thin-QFN package that is just 0.75mm thin.

SYSTEM BLOCK DIAGRAM



PRODUCT OPTIONS

Block	Function	Output Voltage ^①	Capability ^②
REG1	Step-Down DC/DC	0.6V to 3.9V	350mA
REG2	LDO	0.6V to 3.9V	80mA
REG3	LDO		150mA
REG4	LDO		300mA

①: Output voltage options detailed in this table represent standard voltage options, and are available for samples or production orders. Contact Active-Semi for more information regarding semi-custom output voltage combinations.

②: Contact factory for additional available products or custom requirements.

FUNCTIONAL BLOCK DIAGRAM

