NXP Power Management IC for Low Power Applications
PCA9420

Designed to provide a full power management solution for low power applications

NXP’s PCA9420 is highly-integrated Power Management IC (PMIC), greatly extends battery life, thanks to our light load power efficiency, ultra-low standby power, two integrated high-efficiency buck regulators, ultra-small footprint, and built-in “mode transition” function for fast PMIC operation mode switch. Easily compatible with an array of different MCU operation modes, it is enabling a new wave of power efficient devices for Li-ion battery powered low power applications, such as hearable, fitness band, watch.

**KEY FEATURES**

- Ultra-compact Low-Iq PMIC for Li-ion battery powered low power applications
- Very low Iq, high light load efficiency, longer system standby time
- Highly integrated solution, flexible programmability, small solution size
- 20V DC Tolerance on Vin Pin with Programmable OVP
- Fm+ 1MHz I2C Interface
- Offered in two package options:
  - WLCSP 25-bump, 2.09mm x 2.09mm, 0.4mm pitch
  - QFN 24-pin 3mm x 3mm

**TARGET APPLICATIONS**

- Wearable devices
- Hearable device
- Other low-power applications powered by Li-ion battery
### OPERATION CHARACTERISTICS

#### EFFICIENCY CURVES FOR SW1

**Efficiency vs. \( I_{\text{OUT}} \) BUCK #1**

![Efficiency vs. \( I_{\text{OUT}} \) BUCK #1](image1)

**Efficiency vs. \( I_{\text{OUT}} \) BUCK #2**

![Efficiency vs. \( I_{\text{OUT}} \) BUCK #2](image2)

Labeled Photo of Efficiency Curve #1

### EVALUATION KIT GUI

![EVALUATION KIT GUI](image3)

### EVALUATION KIT

![EVALUATION KIT](image4)

To get started and to learn more, visit [www.nxp.com/PCA9420](http://www.nxp.com/PCA9420)