

Industry's Most Efficient Nano Power Harvesting Solutions

Extract and manage μW to mW



Overview

Energy harvesting with breakthrough TI technology allows the development of systems that extract and manage nano power from a variety of sources such as solar, thermal electric, electromagnetic, and vibration energy. With the reality of years-long battery life, TI technology enables new applications that are simply not possible with traditional battery-powered systems. From solar-powered sensors for wireless monitoring of factories or farms to using body heat to power sensors on medical and fitness equipment, TI and leading energy harvesting partners are creating a complete ecosystem for designers to envision and create a battery-less world.

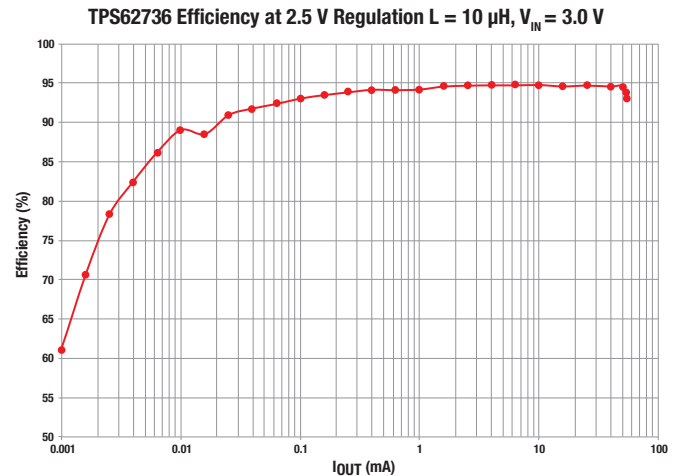
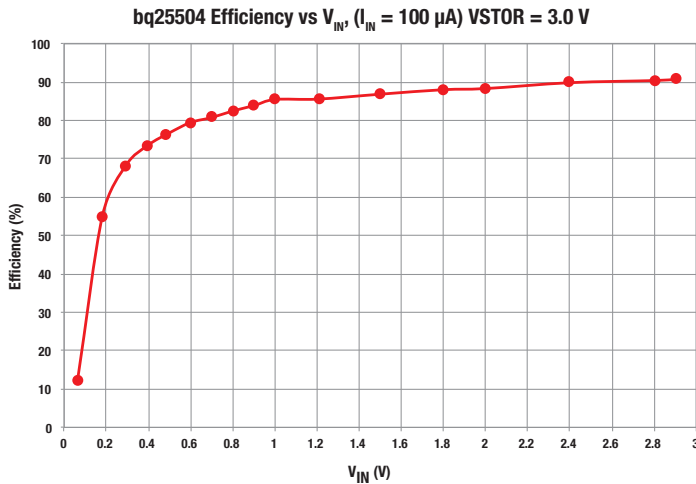
From low power to no power, TI delivers the most efficient energy harvesting technology

- Low quiescent currents (350 nA typical)
- >90% conversion efficiency even at currents as low as 15 μA
- User-programmable devices with Maximum Power Point Tracking (MPPT) for optimized extraction
- Cold start capability for very low input conditions

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Featured Energy Harvesting ICs

| Product | Description |
|------------------------|---|
| bq25505 | Ultra-low power boost converter with battery management and autonomous power path multi-plexing |
| bq25504 | Ultra-low power boost converter with battery management |
| bq25570 | Ultra-low power boost converter with battery management and buck output regulation |
| TPS62736 | Ultra-low Iq nano-buck regulator |
| bq25504EVM-674 | Evaluation module for bq25504 ultra-low-power boost converter |
| TPS62736EVM-205 | Evaluation module for TPS62736 programmable output ultra-low-power buck converter |



bq25504

Ultra-low power boost converter with battery management

Key Features

- High-efficiency DC/DC boost converter/charger
- Programmable dynamic Maximum Power Point Tracking (MPPT) with cold start feature
- Flexible energy storage options
- Battery charging and protection



bq25570

Ultra-low power boost converter with battery management and buck output regulation

Key Features

- High efficiency DC/DC boost converter/charger with built-in buck regulation
- MPPT with cold start feature
- Flexible energy storage options
- Battery charging and protection



bq25505

Ultra-low power boost converter with battery management and autonomous power path multi-plexing

Key Features

- High-efficiency DC/DC boost converter/charger with MPPT
- Autonomous multiplexing for primary and secondary power
- Flexible energy storage options
- Battery charging and protection



TPS62736

Programmable output Nano-Power buck converter with 50 mA load capability

Key Features

- High-efficiency (>90% at 15 μA) buck regulator with programmable output regulation
- Ultra-low active current (350 nA)
- Pass mode option
- Two power-off states, including Input Power Good indication



For more information, visit ti.com/energyharvestingICs

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