AdaptivEnergy

AdaptivEnergy.com

DATA SHEET

Energy Harvesting

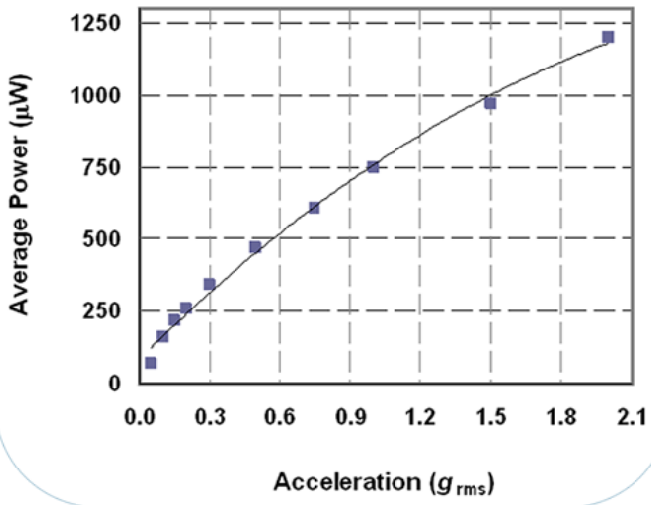
60Hz Joule-Thief™ Module

Joule-Thief™ is a miniature vibratory energy harvesting module ideal for battery extension or replacement in wireless machinery conditioning monitoring, sensing and other low power applications.

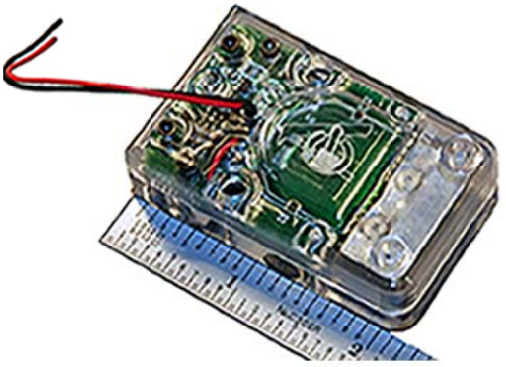
Joule-Thief™'s stress-engineered Smart Energy Beam™ produces more power output than any other energy harvesting technology available. The Joule-Thief™'s highly efficient proprietary circuitry, energy collection and storage electronics are part of the module resulting in a very compact energy harvester with a 2-wire interface.

The base RLP® technology has been tested to billions of cycles at elevated stresses without failure. The Joule-Thief™ is an extremely reliable, long term power source, ideal for wireless or remote sensing.

Average Power vs. Acceleration*

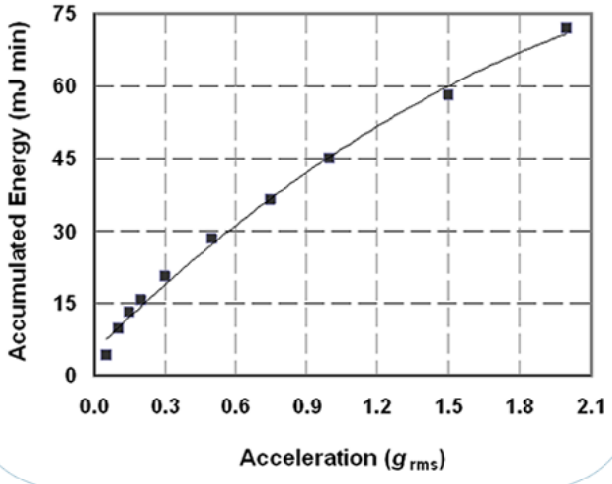


Average Power estimates the capability of a Joule-Thief™ module to provide continuous output to an application. For example, a microcontroller may require a constant level of power even when it is operating in a sleep mode.



Joule-Thief™ Module

Accumulated Energy vs. Acceleration*



Accumulated Energy is the amount of energy that can be stored by the Joule-Thief™ within a given time period. This metric is useful if your application rquires bursts of energy at a known time interval (i.e., for wireless transmission).

Joule-Thief™ Modules

Frequency
50 Hz
60 Hz
100 Hz
120 Hz

Battery or Capacitive Versions available

*The representative power and energy curves are from a controlled shaker table source with a single axis of vibration. Real world applications typically contain multiple axes of vibration, which may affect the harvester's average power.

PT103426 06/2009

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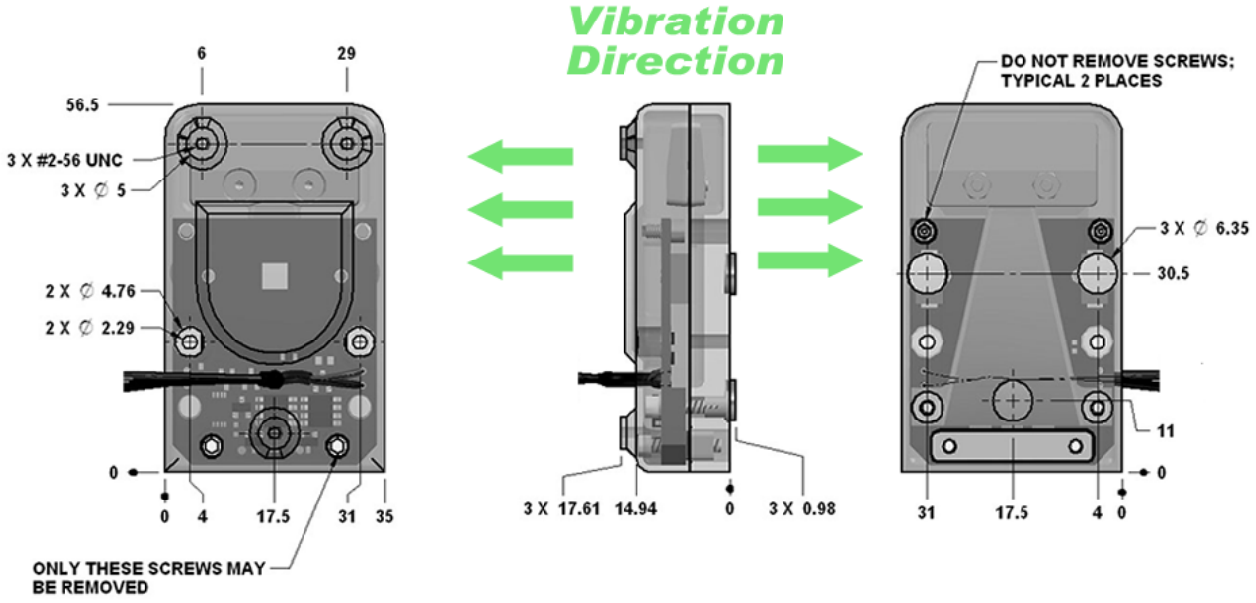
Specifications

- *60Hz RLP® Smart Energy Beam™ (custom frequencies available)*
- *Capactive or Li-ion Battery Storage available*
- *Efficient Energy Key™ Collection Electronics*
- *Standard 3.6V DC Voltage Output (custom output voltage available)*
- *Easily mount with embedded magnets or fasteners*
- *Temperature Range: - 40° to + 80° C*

See AdaptivEnergy's other products for different operating frequencies or call for a design specific to your application.

Dimensions and Mounting

Weight: 1.5 oz (43g)



AdaptivEnergy's piezoelectric-based Powered by RLP™ Technology, coupled with miniature Energy Key™ circuitry, enables a new family of energy harvesting solutions.

AdaptivEnergy

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