

Product Datasheet

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Description

The TL-E1 circuit module includes three parts:

- an AC-DC bridge rectifier,
- a nano-power wake-up circuit, and
- a low-cost voltage regulator.

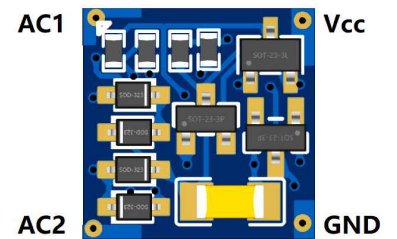
It provides a hardware-defined solution supporting the implementation of energy-driven IoT applications. It can be applied to IoT devices powered by low-power AC or DC sources in energy harvesting scenarios. It is built with only a few discrete components and manages to reduce the size, cost, and quiescent current. The circuit can wake up or turn off the IoT load devices according to the handily configurable voltage thresholds. It is an effective supplement of LTC-3588 in piezoelectric energy harvesting. It can also be used to condition the output power from triboelectric nano-generators and electromagnetic energy harvesters with a large output voltage magnitude.

Model

TL-E1

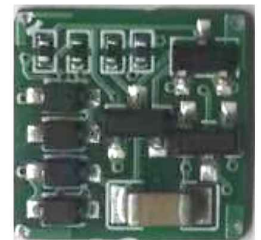
Product category

Power management circuit



Top view

(Electrodes are on the back)



Manufactured PCB

Specifications

Symbol	Parameter	Conditions / remarks	Min	Typ	Max	Unit
	PCB size			11 x 11		mm
V_{ac}	Input voltage	The magnitude of AC input voltage	5			V
V_{sto}	Storage voltage	The voltage after the AC-DC conversion			30	V
V_{cc}	Output voltage	Output current from 1 to 5 mA	2.2	2.3	2.5	V
I_{cc}	Output current		0	3	35	mA

Typical Application

